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ABSTRACT

Based on the view that the classroom teacher is the best judge of materials and equipment to meet the needs of particular learning situations, this publication focuses on the selection of equipment and materials for children in group settings. Part I consists of four substantive articles concerning (1) materials selection from the points of view of elementary school principal and classroom teacher; (2) the importance of careful planning in equipping a center or school; (3) the importance of providing teachers with workshops/facilities in which they can prepare instructional materials; and (4) the relative merits of purchasing ready-made and making one's own equipment, and criteria for deciding the issue. Also included in Part I are lists of criteria for selecting single items of equipment and materials as well as packaged instructional materials. Part II suggests educational equipment appropriate for an infant group, a nursery school group, a kindergarten group, early elementary school groups, and later elementary or middle school groups. It is anticipated that parents will also find the information useful, since much of the equipment and materials, particularly for the younger age groups, can be adapted for use in the home and many of the items can be made or "scrounged." (RH)

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Selecting Educational Equipment and Materials

For School and Home

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Association for Childhood Education International

Selecting Educational Equipment and Materials

For School and Home

Joan Moyer, Editor

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Dedicated
in
Grateful Memory
to
NEITH E. HEADLEY
Consultant, 1976 Edition

Lucy Prete Martin, Director of Publications
Mary N.S.W. Parker, Editorial Assistant, Special Publications

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Page 7, top, Andy Eddowes; bottom, Kathleen S. Ralph
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Introduction

The combined efforts of many hard-working committees have culminated in this publication. Published originally in 1925 and revised more than a dozen times through the years, most recently in 1976, the present revision is an attempt to delete items no longer available or applicable, update relevant information, and add new entries reflecting recent developments and trends that signify changes in educational equipment and materials.

Several factors contribute to the need for the current revision of the publication:

1) The state of the economy, concomitant with a reduction in number and dollar amounts of federally supported educational programs, has necessitated budget cuts and program cutbacks, resulting in limited resources for many centers and schools. The authors of the articles as well as the compilers of the equipment lists have taken this into consideration, and have included teacher-made materials and suggestions for alternatives to commercially produced materials and equipment.

2) The number of mothers in the work force has increased as a result of economic conditions. This, in turn, has created a demand for full-day care for infants and preschool children as well as before-and-after school care for school-age children. The lists include equipment and materials that may be essential to provide services beyond the usual classroom requirements.

3) The "back to basics" movement is influencing education at every level. The question to be answered is, "What is basic to the education of children?" The suggested lists offer a wide variety of manipulatives and concrete materials that are considered "basics" for the optimum development of children of all ages.

4) Children who previously were assigned to special classes are now, by law, mainstreamed into regular classrooms when appropriate. Adaptations in equipment and materials may be necessary, in some cases, to serve children with disabilities or handicaps.

5) Multicultural education has taken on added meaning with the arrival of immigrant families from countries not previously represented in large numbers in our schools and centers. Children from Asian, Latin American and Caribbean areas add new dimensions to classroom learning but may require additional or modified materials to make the transition to a new school and culture.

6) High technology, once the domain of the adult world, has filtered downward, with equipment and materials now available even for young children. Microcomputers and a variety of software are an integral part of the instructional program in many centers and schools. In addition, home computers are available to increasing numbers of children. While microcomputers are included in the suggested lists presented here, the proliferation of computer programs makes it impossible to evaluate individual programs in this publication. Readers are encouraged to adapt the evaluation forms on pages 22-23 to determine the software that best meets their needs.

The concern for nonsexist materials and individualization, emphasized in the previous edition, has been continued. While the level of consciousness has been raised in society as a whole, progress toward eliminating sex-role stereotyping has not proceeded rapidly. Offering a wide range of alternatives and keeping options open for both boys and girls remain priorities.

The publication focuses on equipment and materials for children in group settings. Parents, however, will also find the information useful. Much of the equipment and materials, particularly for the younger age groups, can be adapted for use in the home, either for children in individual families or for home play groups. In addition, many of the items can be made or "scrounged."

ARTICLES AND AUTHORS

A common theme pervades each article: the teacher is the best judge of which materials and equipment, both commercially produced and/or teacher-made, will best meet the needs of a particular learning situation.

Roland Barth and *Kathryn Moe Miller* look at materials selection from the points of view of an elementary school principal and classroom teacher, respectively. They cite numerous illustrations showing why teachers are those

best qualified to make wise choices in selecting materials, in pooling resources, and in timing purchases so that materials can be available for spontaneous needs.

E. Anne Eddowes stresses the importance of careful planning in equipping a center or school. Factors to be considered such as program goals, availability of space, health and safety concerns, exceptionality of students, budget and cultural balance are emphasized.

Arthur Schwieder discusses the importance of teacher workshops, facilities where teachers can prepare instructional materials. His suggestions for establishing and equipping a teacher center are designed for practicality and easy implementation to meet the goal of improving the quality of learning through the use of teacher-designed and produced materials.

Oralie McAfee considers the relative merits of purchasing or making equipment, and suggests criteria for deciding. The anecdotes provided include helpful ideas that can be implemented immediately for instant success.

ACEI expresses heartfelt appreciation to the many people who have contributed to this publication. The information provided will be valuable to administrators, teachers and parents as they select materials and equipment best suited to meet the needs of the children they serve.

JOAN MOYER
Editor/Coordinator

Part 1

CRITERIA FOR SELECTION OF MATERIALS

Selecting Classroom Materials

Roland S. Barth and Kathryn Moe Miller

Three questions are central to any discussion of classroom materials: who selects, what is selected and on what basis are selections made?

The person who selects should be the classroom teacher. While this may be an obvious assertion, it is by no means commonly reflected in public school practice. To the contrary, most decisions about classroom materials are made by state adoption committees, local school committees, central office coordinators of instruction or school principals. At a time when school budgets are shrinking and the cost of materials rising, the few dollars available for classroom materials must be spent where there is greatest payoff for children. Because teachers know the children in their classes better than anyone else, because teachers are familiar with the interests and needs of each student, they are in the unique position of being, not only the best, but the *only* adults in a school system who can effect an optimal match between children and materials. In addition to being in a position to make decisions about the most appropriate materials for children, teachers can do so with greater economy.

At Angier School in Newton, Massachusetts, we have redistributed the budget allocation for the school — about $40 per child per year — giving each teacher responsibility for a piece of the pie. This allocation, which comes to about $300 for each teacher (or $400 for teachers new to the school), does not cover general school supplies such as paper, crayons, paints and ditto paper; it does include all other materials such as books, manipulative materials, special art materials and field trips.

Money is power. It is also a powerful symbol. The messages this policy conveys are many: you are important, instrumental; you are trusted, valued and responsible adults; your observations of children's needs are reliable and central to good teaching and successful learning. We have not found a case of a teacher using anything but good judgment in five years. To the contrary, teachers have responded to "fiscal autonomy" with thoughtfulness and frequently uncanny resourcefulness. Some teachers pool their resources, purchasing and sharing expensive sets of geoblocks, for example. Field trips that cost about $40 by bus in the Boston area have given way to public transportation at 10 cents per child—with the attendant advantages of fostering independence and developing a firsthand acquaintance with the wider metropolitan area. Sharing has also stimulated a great deal of discussion among teachers about children, learning and instruction.

Because children have different needs and interests that vary from year to year, week to week and day to day, teachers must have flexibility in spending. Some children in a class may need extra manipulative experiences while others may need supplemental reading materials. During a study of Early America, one class discussed simple forms of navigation. As a result, the teacher devised an orienteering course that required compasses. From her budget she was able to immediately purchase several compasses at a local store and thereby extend a fruitful area of children's inquiry.

Teachers also need flexibility in timing the introduction of new materials. Some materials will be ordered for the beginning of the school year. It is also essential to reserve funds to spend throughout the year as unanticipated needs and opportunities arise. If children in a class spontaneously develop an interest in railroads and the school and community libraries have little to offer in this field, the local bookstore will have the books to sustain this interest.

In providing materials for the classroom, a teacher also needs flexibility in the quantity of materials provided. Instead of investing in an expensive set of books, one for each child, a

teacher can order enough for five or six students. While one group is working with magnets, another may be painting, another reading and another using math materials. By choosing materials in this way, a teacher can provide options for children while at the same time using limited funds more effectively.

Given responsibility for spending money in these ways, a teacher *must* learn how to make important instructional decisions and budget resources wisely. These are skills central to good teaching which few teachers are called upon to develop and employ because someone else is responsible for deciding what materials to select. Thus, there is a direct and important relationship between teachers being able to select materials for the classroom and professional development.

Although a teacher cannot directly provide a child with learning, he/she can provide materials that will engage a child's curiosity and make learning more likely. Through experience with suitable materials, children reorganize and extend what they know about themselves and their world. Equipped with a budget and confronted with an overwhelming array of possible books, art materials, kits, math games, field trips and social studies units, how can a teacher make wise, helpful and economical choices?

Rather than offer suggestions concerning *what* materials to introduce into classrooms, let us consider five principles that can guide selections and lead toward an optimal match between child and materials.

Principle I: *Whenever possible, permit and encourage children to supply their own materials.*

One way to ensure that a classroom contains materials capable of eliciting interest is to encourage children to bring items of their own to school to explore as a legitimate part of their academic day. In this way children offer their teacher important clues for subsequent selection of materials and activities. For example, a packet of seeds brought in by a child having difficulties with arithmetic may lead to a planting, measuring, graphing project. A model dinosaur brought in by a child with reading problems may lead to a selection of reading materials. Children can also be encouraged to construct many of their own materials for use in the classroom . . . such as devices to measure length, weight or time.

Children have a keen knowledge of the neighborhood in which they live, knowledge that can be put to good advantage by a sensitive teacher. In a classroom where children were studying Colonial America, one child brought in a clipping from a newspaper describing early crafts and details on how to make apple-head dolls. The class was interested in pursuing this activity and when a group began to talk about buying apples, one child volunteered that his neighbor had an apple tree but never used the apples. After school the child and teacher went to see the neighbor and arranged for enough apples for the whole class.

When a child brings an object into the classroom, it is important that it be displayed, shared and used. Teachers can ensure this by providing a display area where children's treasures are shown with dignity. Time can be set aside each day when the items may be investigated. These interesting objects often serve as catalysts for new projects for individuals or groups of children.

Children can also be an excellent source of information about *people* as well as objects in the neighborhood. In one urban school, a group of children loved and lived baseball. The stadium was in the neighborhood. When a class discussion came around to baseball, the children knew that the man who ran the little store across the street had been a member of the first professional team in the city. When the children contacted him, he agreed to come and talk about his career and even play baseball with the children at recess. Thus, with children as a resource, this fertile area was productively incorporated into the children's school program.

Principle II: *Whenever possible, permit and encourage children to explore the real world outside of the classroom and outside of the school.*

Once we recognize that the teacher is only one source of knowledge for children, the classroom is no longer the only place to learn. Learning takes place in all of the world to which a child has access. The countryside offers creatures of every kind, plants, streams; suburban and urban environments abound with distinctive learning opportunities. Each

offers movement, change, pattern and excitement.

It is often possible and profitable for the teacher to release children from a five-hour-a-day schedule in the classroom to allow for exploration outside. A group of children in Oak Park, Illinois, was fascinated by the exterior of a particular house in their neighborhood. It seemed to have unusual nooks and crannies, roofs at different angles, several porches, all surrounded by a high wall, which whetted their appetities even more. They discovered that the house was Frank Lloyd Wright's first studio, built in 1889. This revelation prompted studies of how buildings are designed and built; building of model homes; visits to architects, civil engineers, carpenters, plumbers and city planners. Children came to appreciate the complexities of their own houses and of those around them.

On another occasion, a class was studying farming in the old days and how the sun was important to ripening, drying and preserving various crops. It was a natural step to wonder about the current and future uses of the sun's energy. This inquiry culminated in a visit to a solar energy research center at the Massachusetts Institute of Technology.

When everyone in a school and its neighborhood is regarded as a possible resource, when adults explore with children, all move together toward a much sought-after and seldom achieved goal: sense of community—a group of people working cooperatively toward common ends.

Principle III: *Seek out common, inexpensive, familiar, easily available materials.*

Expensive materials often better serve teachers' and parents' needs than children's. Too many educational "innovations" involve little more than moving from old books, desks and building to new books, desks and building, even though it is not clear that a new $12 textbook leads to more learning than an old $4 copy. Selections often lead to microscopes, filmstrip viewers, reference encyclopedias and complete sets of texts. This kind of expenditure is unfortunate, for these materials may be used by children only in school, usually under strict terms laid down by the teacher who fears being held responsible for their loss or damage. The effect is to localize and separate the child's in-school from out-of-school learning. If multi-base blocks are "classroom" materials, it is unlikely that a child will carry home either the materials or the learning activities associated with them.

When the teachers control their own budget they usually select more common, less expensive materials. Teachers must be resourceful. They have no choice but to make the most of what they have. Teachers and children alike become creative scroungers for all manner of things: old tires for swings, roots of trees for sculpture, Popsicle sticks for arithmetic.

An interest in animals, clay, sand, water, once initiated in school, can be easily pursued by children who find similar materials at home. If children use beans to count, approximate and play games while in school, if they use common kitchen equipment for their science experiments in school, they will have little difficulty continuing these activities at home. Common materials help integrate the two important worlds for children.

Children tend to respect and care for inexpensive, common materials, while they often abuse more expensive "school" equipment. Being instrumental in introducing materials into the classroom, both teacher and student have an investment in them and concern for their well-being and imaginative use. The empty cereal box, the pail of sand or pieces of wood, rope or wire are seen by children, in some important sense, as their own, to be used as they please—to play store, add to, mix, cut, measure, drop, without constant concern and intervention from adults. In contrast to the constraint, dependence and resentment often associated with more "valuable" school materials, children tend to respond to ordinary things with independence and imagination.

Each community has certain materials native to it, easily available to a resourceful teacher. Discovering and making use of the resources of a particular area are not only economical but highly meaningful for children. In one rural furniture manufacturing center, for example, teachers and children found not only the richness of the country life but also the scraps from the furniture industry. They were able to learn about making furniture, from cutting trees in the forest to marketing the completed chairs and tables.

In many areas, teacher centers have been

set up to provide teachers with lists of materials available nearby. With the help of these centers, teachers are able to identify and secure inexpensive, common instructional materials for children.

Principle IV: *Give preference to ambiguous materials that suggest a variety of possible paths of use.*

Another reason for selecting common, inexpensive materials over more expensive manufactured ones is that common materials tend to be more ambiguous and less directive, offering the child a greater part in determining their use. Materials designed to exclude all but one or two possible paths for a child to follow are limiting. They teach dependence upon the structure inherent in the materials (and upon the adult who constructs and supplies them) and leave little room for children to invent, improvise, modify and adapt. Revealing are such phrases as "the child will be led to" and "orderly stages," elaborate directions concerning "proper use," and suggestions on getting children back on the "right path" should their imaginations cause them to deviate from it. Children can assemble a plastic model in only one way; they can use a filmstrip viewer only with the filmstrips available. How much better for children to be instrumental in posing for themselves both the problem and the path they will take in pursuing that problem. Materials are to assist them in these choices, not direct or restrict them.

Structure is not incompatible with good materials for children—many common materials that have not been designed for any one purpose have structure and the capacity to influence and help organize children's thinking. Magnets, sand, wooden blocks are examples. They offer children a major part in determining their use, depending upon the questions they suggest. They encourage inventiveness. With a magnet, a child can pick up dropped pins, or he/she can study polarity or can build a motor. With blocks a student can make balance-boards, houses, forts, highways or a checker game. With sand a child can model, construct, cast, measure, weigh, pour, draw, paint or even smooth wood.

Materials must be selected with sensitivity to the level of independence of each child. For Andy, who is still dependent upon adults to initiate and sustain his learning, structured activities such as playing a board game or viewing a filmstrip are appropriate. He might be at a loss with a sand table. Steve, a more self-reliant child, can successfully use more ambiguous materials such as clay, water or blocks. He is as free to determine their use as a potter, biologist or carpenter.

Children's needs and abilities, of course, change. As children have experiences with ambiguous materials, they will discover new uses for them. A jar of dried beans can be used one day to study estimation, the next as counters in solving a math problem, as playing pieces in a game or as part of the decoration in a collage. As children explore with materials, they need to develop ways of expressing and sharing their observations. After walks in the woods, one group of children decided to record their observations in many different ways: sketching, painting, writing, photography, tape recording. From this experience, children learned to become more versatile in developing and employing different recording techniques.

People as well as materials can be more or less directive, rigid and prescribing. What a teacher permits children to do with materials influences thinking and behaving as much as the inherent properties of the materials. Thus the teacher must both select materials that are likely to provide starting points for children's exploration and then encourage individual children to use the full range of possibilities in the material and in themselves. It is hoped that, in time, all can develop competence, resourcefulness and confidence when confronted with unstructured and ambiguous situations; i.e., with the real world.

Principle V: *Select materials that are likely to ensure active exploration.*

Implicit in the preceding discussion is the belief that learning is a consequence of active exploration in a rich, manipulative environment. Yet we cannot assume that all children will respond with fruitful explorations to a material-centered classroom established by the teacher. But selections need not be random. Although neither children coming to school in September, nor their new teachers, may have any idea where they "left off" the year before, and although the teachers may

have little idea of specific children's interests and capabilities, they can provide materials likely to invite questions and investigation. Last year's permanent record card may reveal a Sally fascinated by fish, an important clue for providing books or materials for her. Because children's interests are often ephemeral, teachers will select materials on the basis of what they suspect children of a given age, sex and background will find exciting.

But teachers should not be surprised or disappointed to find children using materials in unanticipated ways. For example, yesterday three children made robots out of cardboard boxes, though the teacher guessed they would make a train. Today she can provide paint, tin cans and buttons for the children should they wish to embellish their robot. Robot books, robot models, robot pictures can also be introduced. Thus, after the first few days a teacher selects materials that will sustain and extend the interests children have revealed as well as continue to introduce new materials for which she suspects they may find a use. Supplying materials becomes less speculative if based more on careful observation of what children are saying and doing.

Once materials have been selected, it is important for teacher and child to organize and integrate them in a way that will lead to profitable exploration. Promising materials often go unused if not carefully stored and organized. It is even better to find ways of regularly using materials in various parts of the curriculum. One class brought a full-size covered wagon into the classroom for the year. This realia stimulated detailed discussions of the wheels, measurement of the wheels, how to build wheels and the many uses for wheels. With the tools used to make a wagon wheel, each child had the opportunity to carve a wooden spoon, starting from a newly cut log. The task entailed splitting the log, roughing out the blank with a hatchet and a gouge and smoothing the wood with sandpaper.

Like display, the storage of materials is crucial to running a materials-centered classroom. Early in the term a classroom might start out well organized and equipped, but unless a storage and retrieval system has been carefully worked out with children, the materials cannot be found when they are needed — and thus their usefulness is curtailed. A teacher can easily scrounge shoeboxes, fruit crates, pie crates and other storage facilities. A routine cleanup and return of materials at key intervals of each day also ensures that the next person who needs a material will be able to find it, complete and in place. Children who have a central part in storing, repairing and displaying materials are more likely to make full use of them.

In sum, the teacher selects materials that appear appropriate for a particular child with a particular interest at a particular time. Lesson plans, curriculum guides and literature on child development are of little help in making these fine discriminations. Only keen, firsthand observation can guide. Timing the introduction of materials is as important as the materials themselves. Thus, selection cannot be separated from observing and diagnosing children's behavior. To select and provide materials for the release of children's potential tomorrow, we must take advantage of what they are telling us today.

Some Considerations in Equipping a Child Care Center or School

E. Anne Eddowes

Equipping a new child care/educational center or adding to the equipment in an existing facility can be an exciting challenge. There are several factors to consider, however, before any purchase is made. These include the characteristics of the center/school, design of the physical space, safety and health considerations, specific provisions for children with handicapping conditions and budgetary limitations. In addition, some thought should be given to ensure that the center or school reflects the culture and backgrounds of the children served. With some careful planning, appropriate equipment can become an integral part of a program for both children and adults and the selection process can become a manageable task.

CHARACTERISTICS OF CENTER/SCHOOL

The type of facility and the program for which equipment will be selected must be considered. Is it a child care center serving preschool children? Is it a small private school? Perhaps it is a new public elementary school. How many children are served and in what age range? How much time will children be spending there daily?

Preschool programs may be operated for two hours or twelve hours or sometimes twenty-four hours each day. Most elementary school programs function for seven or eight hours per weekday. In small centers there may be as few as ten children. In contrast, a large elementary school may enroll over a thousand students. The children may be grouped by age/grade, or the program may focus on a vertical or "family" grouping arrangement.

Identification of appropriate program goals is necessary before equipment is selected. These goals should be based on the needs of both the children and staff. Needs of the children will reflect their developing competence. Too often it is assumed that individual children have already had certain specific past experiences. Equipment should provide for a range of interesting activities to meet the needs of all the children in the group.

Versatile process-oriented equipment—such as that used in socio-dramatic play, block-building, gardening, cooking, woodworking, water play, language experience, discovery in math/science and creative arts—is necessary (see Part 2, pages 24-72). A balance of equipment can meet the social-emotional, physical, cognitive, language and creative needs of children and contribute to a well-rounded program.

When possible, the staff who will use the equipment with the children should be consulted in order to select materials that will be most helpful to them in implementing the daily activities. If this isn't possible, preservice or inservice training is of critical importance to staff members in identifying both the availability of the equipment and its planned use in the facility. The finest equipment in the world will remain unused if its existence is unknown, or if staff members are unaware of how its use will assist in meeting program goals.

DESIGN OF THE PHYSICAL SPACE

What kind of space is necessary and available in which to use and store equipment? In some areas, specific licensing requirements regulate both indoor and outdoor space in child care facilities or schools. Fencing may be necessary. In areas where poor weather conditions prevail, it is important to have space inside for large-muscle activities. In good weather many "indoor" activities can be moved outside, but shade may be a factor to consider. It is usually helpful to have equipment that can be easily transported.

In planning the use of the space, it is important to think of the total environment (i.e., ceilings, walls, floors, windows, fences, plants, pathways) from a child's point of view.

The entire area used should be both pleasant and functional. Well-designed space can enhance an educational program. Low-level shelving or dividers and moveable tables/chairs or desks when placed strategically can create interest areas and also define traffic patterns. Active areas both indoors and outdoors require ample space and need to be separated from those areas in which quieter, less-active activities take place.

The amount of available storage space is a crucial factor in the selection of appropriate equipment. Some materials will be stored to allow for daily independent use by the children in the classroom. Other storage areas will be needed in which to keep extra equipment for rotation, special projects or regular use outdoors. If there is a lack of storage space, then it may be necessary to create some by installing shelves in the classroom. The shelves can be covered inexpensively with cloth curtains or bamboo shades. Equipment that can be used for several purposes may be helpful (i.e., sand/water table, plastic stacking blocks that can also be used as chairs, dramatic play area that can have a multipurpose focus).

If the facility is shared, there may be additional concerns. For example, some child care centers are housed in churches or community centers, and some schools are used for recreational or extended day care purposes after school hours. Coordination between two staffs becomes necessary in order to know which equipment/materials must be stored and which can be shared. Sometimes it is also necessary to change the design of the physical environment to meet the needs of a different program.

SAFETY AND HEALTH

Safety is a continuing concern in selecting equipment. It should be designed without sharp edges or protruding parts. Wood pieces must be free from splinters. All equipment should be durable and easily maintained. The age of the children using the equipment is an important consideration. For example, infants need equipment that is non-toxic and has no small pieces. Older elementary age children can usually handle equipment that is more complex and fragile, such as a microscope with glass slides.

It is also necessary to keep equipment clean. Toys for young children must be regularly sanitized. Tables/desks and other flat surfaces should be of a non-porous substance for ease of cleaning. Doll and dress-up clothes need to be washable. Some items that are handled often such as cards, pictures and games can be laminated for easy wiping as necessary. A vacuum cleaner is indispensable if rugs and carpeting are used.

Another concern in the selection of equipment is the amount of supervision necessary in its use. Children are usually supervised to a certain degree in any program. Some activities may need more adult supervision than others, however (i.e., woodworking, cooking, some science activities). In selecting equipment, it is wise to consider its use/arrangement in relationship to the level of supervision necessary and available in order to prevent misuses or accidents.

PROVIDING FOR EXCEPTIONALITY

As more and more children with special handicaps are being mainstreamed into regular classrooms, additional equipment may be necessary to meet their specific needs. New equipment has become available in the past few years which can be of assistance in individualizing programs for these children. Regular classroom equipment is often appropriate for them if slightly modified, or if additional help is provided in its use. Knowledge of the type of disability and level of severity is important before equipment can be selected or used.

BALANCE AND THE BUDGET

The most important consideration related to the budget is the development of a comprehensive plan that can provide guidelines over time. There needs to be a balance of equipment within each area. It is necessary to decide which pieces of equipment have first priority and which ones will be added in future years.

Not all equipment must be purchased. Many items can be constructed by staff members, parents or volunteers. Often, community civic groups, high school shop classes and university architecture students can pro-

vide valuable assistance. Some books provide plans and directions for making inside and outside equipment. Expendables such as magazines, milk bottle caps or material scraps may be donated for use in making some pieces of equipment. After the initial needs of the program have been determined, the equipment list should be reviewed to decide which pieces can be purchased and which can be constructed. Even under the most affluent of conditions, it is important to provide the interesting models for creativity which homemade equipment can bring to any educational setting.

Although homemade equipment is important, it is wise to be sure that quality is maintained. All equipment, whether purchased or not, must be durable. In some instances it may be better to purchase equipment that seems easy to build. For example, although construction of unit blocks may seem simple, it is probably better (though more expensive) to purchase precision-cut and finished hardwood blocks to avoid the potential of splinters, dents and splitting.

The allocation for equipment should not be used all at one time. Some funds should be saved to use later in the year. Groups of children and interests within groups vary. It is helpful to be able to add new pieces of equipment in later months to meet individual needs and also to be able to buy newly marketed items as they become available.

REFLECTING CULTURE

Even when programs are similar, it is important for the classrooms to reflect the individuality of the children and adults who spend much of their time there. In the quest for equipment to meet program goals, it is easy to overlook cultural needs. Pictures, wall hangings, dolls, dress-up clothes, books and maps are examples of articles that might be selected which relate to the cultural or ethnic backgrounds of the participants. Finally, in addition to the local cultures, materials and equipment should be available which reflect other cultures in the region, the country and the world.

IN SUMMARY

Equipment selection for any program requires careful planning. It should be a shared responsibility that reflects the needs of both children and adults. Consideration should be given to program goals, availability of space, safety and health, exceptionality, budgetary concerns and cultural balance. Time spent in planning will be rewarded in the implementation of a successful program.

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Teacher Workshops: Access to Equipment, Materials and Ideas

Arthur W. Schwieder

Teachers are trained professionals whose experience and training make them best suited for determining which learning materials are most appropriate for their students. Within the scope of many school divisions and teacher training institutions, there are facilities designed to allow teachers to prepare instructional materials for use in their classes. Whether these facilities are called "Teacher Centers," "Instructional Materials Centers" or "Teachers' Resource Workshops," they all serve the basic purpose of enriching instruction by providing for the development of instructionally sound learning materials that meet specific learner needs.

The relative worth of such a facility to the overall instructional program cannot be equated to the size of its budget or to the technical sophistication of the equipment it contains. Certainly, learning materials that are "on-target" with both the intellectual levels of the students and the curriculum are highly valued in any learning setting. Big budgets and sophisticated equipment do not, however, ensure the development of appropriate materials.

Although money for raw materials and comprehensive production equipment will not hinder the development of a project, good learning materials are more a product of creativity and intuitive "teacher-sense" than they are a product of budget.

The impact and relevancy of teacher-made learning materials can be significant. The importance of maintaining or developing a facility where teachers can create their own learning materials cannot be overemphsized. There are a few common elements that will help to ensure the success of such a center.

The most crucial element in determining the success of a Teacher Workshop is also the most intangible element. A successful workshop must have a "personality" which can be described in terms such as supportive, nonthreatening, informal and flexible. A spirit of collegiality must prevail so that teachers are not reluctant to try new ideas or to share. A workshop in which teachers are comfortable and made to feel important will record far greater successes than a workshop in which teachers feel that their efforts are viewed with a negative, critical eye.

If the workshop has a designated staff, the staff members must be receptive and willing to go more than halfway to help ideas become finished products. Staff members must be skilled in low-level instructional design; that is, they must be able to ask the right questions to help a teacher-client mold an instructional need into a viable instructional tool in an appropriate format. Nurturing a teacher's "willing-to-try" attitude is critical.

Also critical is the concept of maintaining low user cost. User cost, a term carried over from the business world, refers not only to the monetary expense of services to users but also to the time and energy a user must expend in order to access desired services.

In today's jargon, user cost could be called a "hassle" factor. How accessible are the materials and resources to the teachers who intend to use them? If the Teacher Workshop is "too much trouble" to use because of its location, its hours of operation or other roadblocks, it will not be used. As stated earlier, a Teacher Workshop exists to help teachers enrich their instruction, and every effort must be made to keep all user costs down.

A Teacher Worshop must be a workplace and not a showplace! It exists as a service unit designed to help teachers do their best. It must provide a stimulating environment and allow teachers to develop a sense of camaraderie and ownership and a feeling that their creative efforts are valid.

Building on the strength of success is another characteristic of successful Teacher Workshops. Many centers are started in empty classrooms with existing school supplies and equipment and the good intentions

of a few conscientious teachers. These teachers cooperate, collaborate and develop materials for their own classroom use. Other teachers become involved as they realize the possibility of improving their own instructional efforts. Each instructional success brings expanded interest and visibility. Over time, a large number of teachers come to rely on the workshop, and requests for additional support and resources are taken seriously by the administration.

Research on the instructional effectiveness of a variety of learning materials indicates that well-made teacher-produced items are at least as effective as commercially prepared items. In addition, they have the advantages of being prepared for *the exact needs* of a specific group of students. Again, teacher creativity and intuition are more critical than budget.

In many instances, blaming the lack of good instructional materials on the absence of sophisticated production equipment or a large budget is a "cop-out."

In developing a Teacher Workshop, start small. Survey faculty members for interest and areas to include and then demonstrate that you can consistently supply the services you advertise.

Initially, stock as many of these materials as possible: poster board (railroad board); 8 1/2" × 11" sheets of clear acetate; markers, both acetate and regular. Invest in several good pairs of scissors and several steel meter sticks (for measuring and for straight edges). Check your local suppliers; for a few cents more they may be able to cut poster board into flash-card sizes, saving you many hours of cutting. Scrounge at least one opaque projector, one overhead projector and a dry mount press, if possible. X-acto type razor knives and metal rulers are also indispensable; but human nature demands that razor knives, rulers and markers be considered consumable items since they disappear regularly.

Develop a network for accessing resources available in the community. Roll-ends of paper from the local newspaper can provide excellent background for bulletin boards or for large signs. Reprocessed X-ray film can provide excellent, light blue/gray colored, overhead transparency sheets. Federal surplus supply warehouses can provide a myriad of useful items, from photo chemicals to drawing boards and file cabinets. Collect items such as baby food jars, large pieces of cloth, margarine tubs and chicken wire. In keeping with the philosophy of the garage sale, "One man's trash is another man's treasure!" Half-full cans of paint that have sat in the basement for a few years might be put to good use by some other teacher.

Expanding into handmade filmstrips and slides takes very little money. Many library and audiovisual supply companies offer clear leader for sale in a variety of widths. This film, which is made to be spliced onto the beginning or end of motion picture films, can be turned into excellent learning materials. For example, a 1000-foot roll of 35mm clear leader, which sells for about $60, can be turned into hundreds of filmstrips. (Handmade filmstrip kits sell for about $50 and contain little more than 50 feet of 35 mm film with a frosted surface to write on and a template for gauging image size. Any fine-tip markers that will write on overhead transparencies will work on 35mm clear leader, and an old filmstrip can serve as a guide for image size!) Purchase 35mm slide mounts, at approximately $4 per 100 mounts and mount slide-sized pieces of clear leader to produce titles or hand-drawn slides.

As you expand, consider an inexpensive cassette recorder/synchronizer, a copy stand and an adjustable 35mm camera for creating slides of graphic materials and small, relatively flat objects.

Large sheets of triple-thick corrugated cardboard can be stocked for use as puppet stages, portable bulletin boards, table dividers and hundreds of other invaluable classroom items.

A Teacher Workshop exists for the sole purpose of improving the quality of learning in schools by allowing educators to design and produce effective, student-specific learning materials. Top priority must be given to supporting the needs of the teachers who use the workshop. A Teacher Workshop can only be successful if it provides access to materials, equipment and human resources. Surely, materials and equipment are important, but providing a creative, collaborative environment is most important of all.

On Making or Buying Materials

Oralie McAfee

In a time of shrinking budgets and rising costs, deciding whether to buy or make needed instructional equipment and supplies is especially difficult. Neither purchased nor homemade material is inherently superior, and few generalizations can be made from item to item. Each case must be evaluated and decided about individually. Some of the factors to be kept in mind are fairly tangible and straightforward, such as durability, safety and comparative cost. Other considerations are less tangible but no less important: the satisfaction that parents and teachers gain in creating something for children, and the possibility that homemade materials will more adequately reflect local culture and environment.

In weighing the relative merit of purchasing or making a specific item, consider these things:

COST

What will be the comparative cost of the two end products? Remember to include in the computations an allowance for the projected life of the materials, the number of children who will be using them and *your time*, as well as the initial cash outlay.

DURABILITY

Will the item be more durable purchased or homemade? Instructional items made of flimsy material seem to invite destruction and should be avoided, whether store-bought or homemade. Many materials using oaktag or cardboard last such a short time they are hardly worth the time a teacher puts into making them. On the other hand, teacher- or parent-made flannelboard figures may remain in perfect condition long after the loss of arms, legs, tails, chimneys and other appendages have made commercial sets useless. Just sew together two layers of cutout felt figures, draw on distinguishing characteristics with a felt pen, and you have constructed a set that will last indefinitely. Proper protection will extend the life of paper or tagboard materials; laminate or cover them with clear contact paper. The new finishes now available for wood will protect your investment in any wooden items.

SAFETY

Each item must also be given separate consideration to see whether or not it is safe. Pine blocks develop splinters whether they are purchased or made at home. Regardless of how much was paid or how lovingly the donated piece was made, improperly designed and constructed outdoor equipment can be dangerous![1]

SUITABILITY TO CHILD'S AGE AND ABILITY

As misleading as the "suitable for children from 3 to 8" or "1 to 6" labels are, they are probably as accurate as many adult estimates of the appropriateness of materials, especially for young children. Perhaps because of the difficulty and expense of working with wood, metal and plastic, many teacher-made materials tend to be of paper, cardboard, pictures, letters and numbers—often too abstract and symbolic for young children. On the other hand, many "just right" items are quickly and easily made, often from scraps. Some examples are yarn balls; sound cans; carpet-sample swatches for sorting and arranging; a board with many different hardware closing-devices; or fabric attached to boards with various kinds of slide fasteners, buttons, metal grips, snaps, hooks and eyes, ties and Velcro. Clever

[1]For many useful safety-suggestions with reference to children's play and educational materials, write to the U.S. Consumer Product Safety Commission, 5401 Westbard Ave., Washington, DC 20207.

adults can make these items to match more closely the capabilities and interests of children than any boards that might be purchased.

CONCEPTUAL CORRECTNESS

Teacher- or parent-made materials should pass the same rigorous tests of accuracy and correctness that we apply to purchased materials. Particularly in instructional games, we need to make sure that the items we construct accurately convey the ideas we are trying to teach. Mistakes are easy to make! Perhaps we construct a classification game that misclassifies animals or plants, or teaches that a square is not a rectangle, or that we must always count from the left to right. In the process of making games and toys for children, we must present concepts and processes accurately and understandably. If directions are involved, they should be clear and reflect current best thinking about how to talk with children; for example, name objects and relationships, give alternatives to "test" questions, use both convergent and divergent questions as appropriate.

CREATIVITY AND IMAGINATION

Will the material, either purchased or constructed, help foster children's creativity and imagination? As teachers we are inclined to provide too much in too realistic a form. Suggestions of the essential elements of real life may be all children need. A few materials to improvise with, a suggestion or two, and today's children can create their own learning materials, their own toys, as readily as yesterday's. But can handmade or improvised games and learning materials compete with "Space Invaders," "Star Clash" or even "Hangman," complete with high-resolution graphics and flashing lights on the home or school microcomputer? Yes, of course! They fill different human needs. Television did not replace children's desire to have someone read to them. Microcomputers, calculators and other electronic devices will not stifle creativity and imagination unless we allow them to. Indeed, modern technology has made "homemade" computer programs quite feasible for students, if not for their teachers!

INTANGIBLE VALUES

Does the making (or purchase) of the item have other important values that must be considered? Recycled, improvised materials may be "beautiful junk" to an ecology-minded, middle-class teacher. They may be "just junk" to a pupil and family who have never had anything else—and thus rejected. Material goods have different symbolic meanings to different people. Many of us today need to learn—or be reminded—that we don't have to *buy* everything. Other intangible values to be considered are the investment and involvement that making an item requires—of teacher, parent, child or community group. A book you have made yourself is more than just a book. Adults who use tools to give life and form to an idea they have for children's learning, be it ever so simple, are never quite the same. Watch a group of parents at a "make and take" workshop to see in action those intangibles of enthusiasm, excitement, satisfaction and joy of making something for someone you care about.

Industrial by-products that a parent collects from work—spools, mill-ends, cardboard tubing and sign plastic—contribute far more than the value of the products themselves. Items that reflect the cultural and environmental diversity of different peoples and locales teach lessons over and above the particular instructional concern of the moment.

REFLECTIVE OF THE CHILD'S CULTURE AND ENVIRONMENT

Mass-produced instructional materials are deliberately designed to appeal to the broadest possible market, and can never reflect children's cultural heritage and current environment in the way locally constructed or collected materials can. The shiniest and most expensive "play structure" may be abandoned when a 4-year-old from a ranch community sees a well-worn saddle on a saw-horse steed. Sometimes products designed to have ethnic or regional appeal are too neutral or too far removed from children's experience to have meaning. Spanish-background peoples in the various regions of the United States have some things in common, but also have unique—and differing—heritages and current

cultures. To get authentic material, save pictures from local, regional or ethnic magazines rather than purchase them in kits. Better yet, take your own local pictures and have posters made. One or two posters a year would quickly build into a substantial "our community" file. Construct a lotto game on a local theme ("Buildings in Our Neighborhood," "People in Our School"), a fair, rodeo or other local celebration. Make books or help the children make books on any local themes. Parent-made stuffed cloth dolls or flannel "paper dolls" can have varied colors and types of hair, skin, eyes and other characteristics. They can be dressed in modern or traditional dress, which parents can also make and authenticate. A teacher with access to a camera can make locally oriented instructional slide sets on any theme, except perhaps outer space!

Heritage games, toys and other amusements can help children learn to appreciate their own backgrounds, the "olden days" and the virtues of an old/new conservation ethic. New in your community? Or too young to remember? Ask parents and grandparents what they played with when they were growing up. You may get some ideas to use in the classroom or center, or to suggest to other parents. Some parents in the southwestern part of the United States taped their memories of what they played with when they were young. Most of the materials were natural, unstructured or recycled products. In our urban society, some of these raw materials may need to be provided by adults, but the joy and pleasure for children will be just as great.

Some of the ideas that could be adapted to a school or center are given below.

OUTDOOR EQUIPMENT WAS SCARCE

"We used an old worn-down broom as a horse in our cowboy games."

"We tied old tires by rope to a tree branch and used them as swings."

"We filled a burlap 'gunny' or 'croaker' sack part way with sand, looped the top over in a knot, and then tied a rope to it and to a tree branch."

"We would make-believe a bale or two of hay was a house or fort."

"For building blocks, we used old bricks we found around the yard to outline an outdoor playhouse, barn, barnlot, store or other structure. When we didn't have bricks, we used rocks and stones. Sometimes we used wood that had been cut for firewood."

"Mud was used to build outside ovens in which we would pretend to bake bread."

"We used a clean oil-drum to 'log roll' on, yell in, hide in, tummy-roll on and jump from."

NATURAL UNSTRUCTURED MATERIAL WAS ABUNDANT

"On the Navajo reservation when I was little I tended my grandfather's sheep. I would search out areas where I could find soft clay. I would shape figures of men and women and sheep with clay. I would find sand and press it in my hand and shape it into a small hogan. I pushed my finger into the side to make a door and stuck a small twig in the top to make a chimney. The clay figures of the sheep went in a small twig corral near the hogan, and the people would fit into the hogan."

"There were many different colors of sandstone near our home. I spent hours pulverizing the sand and layering it in soft colors in an old canning jar."

"We made corncob dolls. The ear of corn was the doll, the silk was the hair, and the leaves were draped around the corn as clothes."

"We would fill the small milk-cartons our older brothers and sisters brought home from school with mud mixed with dried straw to make adobe brick. We built dollhouses with roofs of small tree twigs or branches."

"We played a lot with mud and water, constructing roads, ditches, rivers and canals."

"We molded mud-pies in flat empty cans."[2]

Should we make or buy materials for children's learning? As you can see, there is no quick and easy answer. Children need both homemade and purchased materials, and only *you* can decide which kind is best for which kind of learning.

[2]Examples collected by Ruth Spar and Oralie McAfee

Criteria for Selection of Single Items of Equipment and Materials

Equipment and Supplies Committees (1967–1973)

Functional Requirements

Does the material possess the following features?

*Safety**

- non-toxic and easily cleaned
- designed to avoid injury from sharp edges, protruding parts, tipping, splinters, electrical, mechanical and thermal hazards
- flame resistant

Durability

- strong enough to withstand heavy usage
- resistant to weathering
- easy to care for and store

Adaptability

- appropriate in size and form for intended ages
- usable in more than one way
- nonsexist

Accountability

- reasonably priced
- appealing on a long-term basis

*For many useful safety-suggestions with reference to children's play and educational materials, write to the U.S. Consumer Product Safety Commission, 5401 Westbard Avenue, Bethesda, MD 20816.

Educational Requirements

Does the material contribute to growth in the following areas?

Intellectual

- accomplishes a variety of purposes within given or related areas
- adapts to different ages, needs, interests and abilities
- arouses curiosity, stimulates initiative and invites exploration
- provides for concrete experience as a basis for abstract learning
- involves as many of the senses as appropriate
- promotes thinking and encourages practical problem-solving
- stimulates skill development and broadening of concepts

Physical

- motivates action
- allows freedom of movement
- stimulates muscle development and coordination

Social/Emotional

- encourages a favorable attitude toward self and others
- stimulates imaginative and creative responses
- provides opportunities for a variety of individual, partner and group activities
- gives pleasure

CRITERIA FOR SELECTION OF PACKAGED INSTRUCTIONAL MATERIALS

Equipment and Supplies Committees (1967–1973)

Package Title or Trade Name _____

1. **What does the package contain?**

   Books _____ Games _____ Pupil guides _____
   Charts _____ Manipulative materials _____ Record-keeping forms _____
   Films _____ Models _____ Tape recordings _____
   Filmstrips _____ Pictures _____ Teacher guides _____

   Other _____

2. **Can items in the package also be purchased separately?**

   Yes _____ No _____ Explanation _____

3. **For what age groups is the package recommended?**

   _____

4. **For what pupil population is the package designed?**

   Bilingual _____ Disadvantaged _____ Regular _____ Special education _____

   Other _____

5. **For what period of time is the package designed?**

   Less than a half year _____ Half year _____ Year _____

   Other _____

6. **For what kinds of instruction is the package designed?**

   Demonstration by teacher only _____ Total class _____
   Individualized _____ Use by aides and volunteers _____ Small group _____

   Other _____

7. **Which of the following areas of pupil growth are covered?**

   Cognitive learning _____ Perceptual training _____
   Language development _____ Self-concept development _____
   Motor development _____ Social development _____

   Other _____

8. **What motivating factors are present in the material?**

   Arouse curiosity _____ Stimulate interest _____
   Develop initiative _____ Stir imagination _____
   Promote creativity _____ Other _____

9. **Does the publisher offer new, creative materials put together to emphasize interrelationships or merely a repackaging of previously-offered materials?**

   Comments _____

10. **Are the materials open-ended, inviting children's questions and creative responses?**

    Comments _____

11. **Do the materials allow children of different abilities and aptitudes to make progress that is satisfying to them?**

    Comments _____

12. **Is there evidence that the material is designed to integrate children's experiences for use in future learning, in contrast to individually-paced, repetitive, fill-in-type exercises?**

    Comments _____

13. **What discrepancies exist between claims of manufacturers and the results of staff evaluation?**

    Comments _____

14. **What are reactions to the total packages?**

    Comments _____

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Part 2

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS

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SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

An Infant Group

6–8 CHILDREN — AGES 0-3

INTRODUCTION
I BASIC ENVIRONMENTAL EQUIPMENT
II HOUSEKEEPING EQUIPMENT AND SUPPLIES
III HEALTH
First Aid and Toilet Supplies
Food Service
Resting Facilities
Safety and Sanitation
IV FIRST TOYS
V PLAY EQUIPMENT (INDOOR/OUTDOOR)
VI AUDIO/VISUAL SUPPLIES
VII SENSORY PERCEPTION
VIII ART
IX MUSIC
X LANGUAGE ARTS
XI MATHEMATICS
XII SCIENCE
XIII RECORD KEEPING

During the time children are cared for in an infant care group, they undergo tremendous developmental change. The senses are becoming more well-defined, physical growth and the refinement of physical skills are occurring, and language and the awareness of self are developing. Because of the rapid development of these areas, toys for the infant group should be selected on the basis that they encourage one or all of these areas.

Materials that can be moved, manipulated and "mouthed" provide this stimulation. Bright colors, contrasts, patterns, smells and sounds are attractive and interesting; therefore, a variety of materials that appeal to the senses should be supplied. These items do not have to be expensive. Mirrors, balls, pots and pans, paper to rattle, scraps of different textured cloth and fresh flowers can provide some of the experience.

One of the sensory areas frequently employed is the mouth. For this reason toys that are toxic, have sharp edges and/or small breakable parts should be AVOIDED. Instead, items that are sturdy, washable and flexible should be sought.

Children respond to changes in the environment and because of this, toys should be rotated to encourage new and different responses. When a familiar object is re-encountered, the child may respond with delight; but if the objects remain the same, the child may become bored and give little attention. A child can also be overwhelmed or overstimulated by too many materials. Making a choice may be difficult and the child may "flit" from one object to the next or may become so overwhelmed by the vastness of the choices that she/he may sit and observe rather than become involved. The wise parents and caregivers will limit the amount of materials so that the objects are stimulating yet not overwhelming and will alternate them to encourage new responses.

Because of the rapid growth during infancy, children at different ages will respond to different materials. Infants are attracted to movement, sounds and contrasts in color and pattern. Rolling toys and eye-level mirrors are interesting to the creeper or crawler while materials that can be pushed, pulled and taken apart appeal to the toddler.

We cannot overlook the importance of the interactions between caring adults and young children as they explore materials and their environment. Though children have certain basic similarities at a given age, they still remain unique and the parent or caregiver should respond to the child as an individual. This is particularly the case for the child with handicaps or from a different cultural background. Materials should be selected for use with children based on the individual child's capabilities and background. By keeping these suggestions in mind, the adult can provide the child with materials that promote all areas of development.

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

An Infant Group

6–8 CHILDREN — AGES 0-3

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

Note: Items, quantities and priorities suggested on the following pages of this section are to be thought of as guides rather than inventories.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
I BASIC ENVIRONMENTAL EQUIPMENT				
Bassinets/portacribs	2			
Bookcase, slanted shelves on rollers			1	
Box, wooden on rollers, with rope handles		1		
Bulletin board	2			
Cabinet, storage, closed, for adult supplies including first aid, locked, out of children's reach	1			
Carpet in areas as needed	X	X	X	
Chairs:				
Adult Size:				
Regular	3			
Rocking	2			
Child Size:				
High	3			
Rocking	1	1		
Stackable	6			
Clock, wall hung	1			
Clothes rack for drying clothes			1	
Cots, mats or small rugs for resting	4			
Cradles	1			
Cribs	6			
Cubicles or lockers for personal belongings	8			
Curtains and shades as needed	X	X	X	
Cushions, washable, plastic	4	1	1	
Dishwasher or sterilizer	1			
Electric warming tray		1		
Electrical outlet cover for low sockets, as needed	X	X	X	
Feeding and play table	1	1		
File cabinet	1			
Hamper for soiled clothes (See Health Materials.)				
Infant jump seat (floor model)	1	1		
Infant seat	2			
Infant stroller	1			
Infant swing	2			
Labels on clothing, as needed	X	X	X	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Mirror, unbreakable:				
Mounted horizontally at floor level	1			
Mounted vertically at child's eye level	1			
Microwave oven			1	
Portacrib	2			
Playpen for short intervals	1			
Refrigerator	1			
Safety gate	1			
Screens, low folding panels for use as dividers	2			
Serving cart	1			
Shelves:				
High, closed for toys and supplies not in use	1			
Low, open, for children's toys and supplies	1			
Storage bin on rollers for outdoor toys	1			
Stove or electric plate	1			
Tables:				
Adult height for diaper changing	1			
Adult height for working on menus and records	1			
Child height	2			
Serving	1			
Toilet facilities:				
Dressing table	2			
Sink or tub for bathing or plastic bathtub	2			
Tub cradle	1			
Lavatories	2			
Toilet seat	1			
Training chairs	3			
Tote trays, for individual belongings and play materials	4	4		
Trash cans, covered	2			
Vacuum cleaner	1			
Washer and dryer	1			
Wastebaskets, covered	3			
Work station on wheels, for adults	1			
Xerox copier, access to				

*Indicates that multicultural materials are suggested or should be included.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
II HOUSEKEEPING EQUIPMENT AND SUPPLIES				
Brooms:				
Adult size, straight and push 1 each	2			
Child's size, straight	2			
Brushes:				
Bottle	2	2	2	
Counter	1		1	
Hand	2	2	2	
Cleaners, scouring powders, cans	3	3	3	
Dishpan	2			
Dishtowels	6	3	3	
Dishwasher or sterilizer (See Basic Environmental Equipment.)				
Dustcloths	2	2	2	
Dust mop	2			
Electric broom			1	
Hand held portable vacuum		1		
Pots and pans	4	2	2	
Soap, bar and powdered, as needed	X	X	X	
Sponges	3	3	3	
Towels, paper, case of 3,000	2	2	2	
Trash cans, covered (See Basic Environmental Equipment.)				
Trays	4		2	
Vacuum cleaner (See Basic Environmental Equipment.)				
Washer and dryer (See Basic Environmental Equipment.)				
Wastebaskets, covered (See Basic Environmental Equipment.)				
III HEALTH MATERIALS				
First Aid and Toilet Supplies:				
Band-Aids, boxes	2	2	2	
Cotton, sterilized, boxes	2	2	2	
Eye bath	1			
Gauze, sterile, boxes	2	2	2	
Gauze pads, sterile, boxes	2	2	2	
Ice pack	1			
Lotion, nonallergenic	3	3	3	
Medicine dropper	1			
Nonallergenic adhesive tape, rolls	2	2	2	
Paper towels, package	25	25	25	
Petroleum jelly	3	3	3	
Powder, talcum, cans	8	8	8	
Q-tips, boxes	4	4	4	
Red Cross First Aid Manual	1			
Rubbing alcohol	1			
Soap, antiseptic	3	3	3	
Temperature strips	X	X	X	
Tissue				
Facial	18	18	18	
Toilet	25	25	25	
Tweezers	1			
Vaporizer	1			
Food Service:				
Bibs, disposable dental, used with clips	300	300	300	
Bottles:				
4 ounce	2			
8 ounce	2			
Bowls, plates, cups, glasses, unbreakable, each	12	2	2	
Flatware:				
Forks, juvenile	6			
Knives, juvenile	2			
Place settings, adult	6			
Spoons, juvenile	12			
Spoons, serving	4			
Paper cups	200	200	200	
Paper napkins, package of 100	5	5	5	
Pitchers	4			
Toddler trainer cup, two handled	2			
Resting Facilities:				
Blankets	12	2	2	
Cots, folding or stackable (See Basic Environmental Equipment.)				
Cribs (See Basic Environmental Equipment.)				
Mattress pads, assorted sizes	18			
Sheets:				
Cotton, assorted sizes, patterns and colors	18		6	
Rubber, assorted sizes	12		2	
Safety and Sanitation:				
Diaper changing pads, vinyl	6	2	2	
Diapers, disposable and unscented (if not provided by parents or if diaper service is not used), pkg. of 1 doz.	400	400	400	
Dishwasher or sterilizer (See Basic Environmental Equipment.)				
Hamper for soiled clothes	1			
Smocks, infant	4	2	2	
Sprays:				
Air freshener, cans	2	2	2	
Disinfectant, cans	4	4	4	
Towelettes with baby oil, disposable, as needed	X	X	X	
Towels:				
Bath size	12	6	6	
Fingertip size	18	3	3	
Trash cans, covered (See Basic Environmental Equipment.)				
Uniforms, adult	3	2	1	
Washcloths	18	18	18	
Washer and dryer (See Basic Environmental Equipment.)				
Wastebaskets, covered (See Basic Environmental Equipment.)				
IV FIRST TOYS				
Clutch balls, large, with finger holds in soft material	2		2	
Cradle gyms—elastic band across the crib from which are suspended bead strings, empty				

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

An Infant Group

6–8 CHILDREN — AGES 0-3

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
thread spools, plastic bracelets, etc.	3		1	
Crib mobiles—moving objects suspended from coat hanger attached to crib, or commercial varieties	4		2	
Rattles, securely enclosed, pleasant-to-the-ear, including measuring spoons on a ring, spools in a box, and sound makers contrived from juice cans and large plastic beads	4		2	
Squeeze toys	4		2	
Sucking and chewing toys, including pacifers and teething rings	6	4	2	
Toys to wear:				
Bell bracelets, made with a strip of elastic and a small bell	4		2	
Colorful wrist bands	4		2	
Foot sock with a smiling face	4		2	
V PLAY EQUIPMENT (INDOOR/OUTDOOR)				
Apparatus:				
Boxes of various sizes for climbing	5			
Crawl-throughs: oil drum, lined barrels, cardboard tubing, perception box	1			
Indoor stair and slide combination	1			
Pads to place under climbing and sliding apparatus	2			
Rocking boat	1			
Tumbling mat	1			
Wading pool		1		
Walking boards—planks slightly raised at one or both ends	1	1		
Dramatic Play:				
Cooking pans	3			
Dishes, soft unbreakable plastic	12			
Dolls, soft unbreakable washable, multi-ethnic, with change of clothing	3			
Foods, unbreakable plastic		3		
Furniture: stove, table, sink, cupboard, bed, baby carriage, one each		6		

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Housekeeping: (child-sized) broom, dustpan, one each		2		
Housekeeping: pots, pans, spoons and other kitchen utensils found in most homes	4			
Playhouse, child-size, with dividers or low screen			1	
Large Muscle Activity Toys:				
Balls, various sizes, 3", 6", 12", 20" diameter, rubber or plastic	4		2	
Blocks, large plastic or cardboard	10	6		
Pounding peg board and mallet	2			
Pull toys, commercial or scrounged	4	2	2	
Push toys	4	1	1	
Riding toys, propelled by arms or feet	3	1		
Rocking horse		1		
Throw toys: Bean bags, foam blocks, textured balls, yarn balls	4	2		
Wagon, small	1			
Sand Play:				
Cups, spoons, plastic bottles and other measuring devices	6			
Dump and fill containers: bowls, cans, pails, measuring cups and spoons, sieve, funnel, scoop, sand shovel	10			
Indoor sandbox or table approx. 24 " x 24" x 5", filled with sand	1			
Outdoor sandbox	1			
Sandbox cover	1			
Umbrella	1			
Water Play:				
Container, plastic bathtub, dishpan or water table	1			
Dump and fill containers: bowls, cans, bottles, pails, watering cans, pitchers	10			
Manipulative materials: corks, floating bath toys, soap, sponge, sprinkler bottle, lotion dispenser, bottle, funnel	X	X	X	
Vinyl sheet to place under water container	1			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
VI AUDIOVISUAL SUPPLIES				
Chalkboard, easily cleaned		1		
Display boards, corrugated or pegboard	1			
Filmstrip projector	1			
Laminated pictures of familiar topics	8	2	2	
Record player	1			
*Records:				
Musical: listening, activity	4	1	1	
Narrative: talking stories and poetry, such as Peter Rabbit	4	1	1	
Tape recorder with playback		1		
Tapes/cassettes to record children's speech	4			
*Tapes/cassettes: sounds of different animals, city noises, farm noises, stories, music	4	2	1	
VII SENSORY PERCEPTION				
Listening Materials:				
Bell blocks, wood, with bell inside each block, set of 5	1			
Bell bracelets		6		
Chimes, wind		2		
Mobiles, musical		2		
Music boxes, pull-a-cord or wind-up	1	1		
Paper to rattle and tear	X	X	X	
Push, pull and squeeze toys with pleasant sounds	6		2	
*Records and tapes, children's music, classical, bilingual, special interest				
Smelling Materials:				
Fresh flowers	X	X	X	
Spices, sealed, in plastic bottles with perforated lids, set		1		
*Tasting Materials:				
Foods, new and familiar, in identical containers, for identification games	X	X	X	
Foods for tasting: banana, dry cereal, hot cereal, jello, lemon, orange, puddings	X	X	X	
Touching and Feeling Materials:				
*Cuddle toys, animals and dolls	5	2	1	
Flannel covering for babies' bottles to encourage feeling while feeding			3	
Poke boxes (shallow boxes with hand holes on lid through which infant can touch variety of textures)	1	1		
Texture ball (cloth ball covered with such textures as velvet, fur, sandpaper, cotton, etc.)	1	1	1	
Texture glove made from a variety of materials, to be worn by adult			1	
Wall hangings, textured and touchable	1	1		
Warm and cold materials: hot cereal, ice cubes, etc.	X	X	X	
Visual Materials:				
Beads, in bright colors, large wooden or plastic to pop, snap together or string on yarn, rope or shoelaces	200			
Color Paddles				
Cylinders in graduated sizes, set of 5	1			
Mirrors	2			
Nesting boxes	2			
Mobiles, brightly colored	2	1	1	
Peg board with large colored pegs	2			
VIII ART				
Accessories:				
Brushes, large, for water painting and painting with color	5			
Crayon holders	2			
Easel			1	
Smocks (Use old shirts worn backwards or aprons.)	3	1	1	
Media:				
Beauty objects, nature's contributions, such as flowers, plants, rocks, shells, as available	X	X	X	
Chalk, soft, white, for chalkboard or paper, sticks	24			
Crayons, large assorted colors	16			
Dough for modeling (1 part flour, 1 part salt, 1/4 part water, mix to soft consistency and store in cool place in waxed paper. Plastic cookie cutters add to the fun.)	X	X	X	
Illustrations of pleasing line, form, color, such as designs in wallpaper sample books, gift wrappings, wall decorations of mounted fabrics, magazine pictures	X	X	X	
Poster paint, red, yellow, blue, black, white, qt. each	1	1	1	
Soap suds, colored, made with vegetable coloring	X	X	X	
Tray, plastic or metal (for finger painting)	2			
Paper:				
Assorted colors for mounting display materials, pkg.	4			
Assorted sizes, shapes and colors	X	X	X	
Computer print-out, scrounged	X	X	X	
Magazines, old	X	X	X	
Newsprint, pkg. of 100 sheets	3	3	3	
Wallpaper samples	X	X	X	
IX MUSIC				
Autoharp	1			
Bells, melody, hand and wrist, set	1			

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

An Infant Group

6–8 CHILDREN — AGES 0-3

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Chimes, set	1			
Drums:				
Bongo	2			
Handcrafted instruments, such as coffee can with plastic lid or innertube top, oatmeal box with lid glued on	4			
Rhythm sticks, pair	2			
Maracas	2			
Tambourines	2			
*Song Books: songs such as "Ring Around the Rosie," "London Bridge Is Falling Down," "Pop Goes the Weasel"	2	1	1	
Xylophone	1			
X LANGUAGE ARTS				
Booklets, to record child's verbalizations	8	8	8	
*Books:				
*Cloth and paper, with squeeze and feel pictures, various sizes and shapes	10	4	4	
Nursery rhyme books	2			
*Song	2	1	1	
*Story, to read to children, plus access to library	10	4	4	
*Discussion pictures about foods, health, safety, science, social learning	8	2	2	
Feel box (Use small box with child-handsize hole. Fill with objects child can feel, take out, talk about and put back.)	1			
Flannel board	1			
*Flannel board accessories: animals, geometric shapes, letters, numerals, people	18			
Language games involving identifying, sorting, matching	4			
*Puppetry, familiar figures:				
Hand puppets, multi-ethnic	4			
Homemade puppets, stick, sack, cloth	2			
Screen behind which puppets operate			1	
XI MATHEMATICS				
Books on numbers		2		

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Coffee cans, empty, with clothes pins to be clipped on rim	4			
Counting cubes and disks	100			
Games:				
Form boards	2	1	1	
Number puzzles			2	
Number sorters		2		
Magnetic board and accessories	1			
Manipulative objects:				
Blocks, geometric shapes	10			
Boxes or cans, nested, set	2			
XII SCIENCE				
Aquarium with fish	1			
Beauty examples from nature: autumn leaves, snow, flowers, fruits, nuts	X	X	X	
Bird and cage		1		
Bird Feeding shelf with suet feeder		1		
Floating and sinking objects	6			
Gear turning toys, wood or plastic		2		
Hardware fixture board with workable parts: hinges, door bolts, knockers, knobs, etc.	1			
Locks and attached keys, large	2			
Magnets, large horseshoe	2			
Magnifier on tripod		1		
Nuts and bolts, large, wood or plastic, set		1		
Plants, living	X	X	X	
Shells and rocks, wide assortment, set of 8-10	1	1	1	
Terrarium with plant and amphibian life		1		
XIII RECORD KEEPING				
Attendance record sheets, weekly	45	45	45	
Budgeting record book	1	1	1	
Card file for anecdotal records	1			
File cards, 6" x 4" or to fit available file drawers, pkg. of 100	5	5	5	
Health and general information reporting sheets				
Microcomputer			1	
Portfolios of children's work	12	12	12	
Progress reporting sheets on specific areas	12	12	12	
Teacher planning book	1			

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Early Childhood Committee
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SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

INTRODUCTION
I BASIC ENVIRONMENTAL EQUIPMENT
II GENERAL MAINTENANCE, INDOOR/OUTDOOR
III HOUSEKEEPING SUPPLIES
Cleaning and Laundry
Sewing
IV HEALTH AND SAFETY
First Aid Supplies
Food Preparation and Service
Resting Facilities
V AUDIOVISUAL EQUIPMENT
VI PSYCHO-MOTOR DEVELOPMENT
VII PERCEPTUAL DEVELOPMENT
VIII BUILDING AND CONSTRUCTION
IX CREATIVE ARTS
X DRAMATIC PLAY
XI MUSIC
XII LANGUAGE ARTS
XIII MATHEMATICS
XIV SCIENCE
XV OFFICE SUPPLIES AND RECORD KEEPING
XVI TRANSPORTATION

For both child and teacher, nursery school affords exciting challenges. Although each child brings individual styles of relating to the world, all 3- and 4-year-olds share many common characteristics.

Through a wide variety of sensory exploration, all nursery school children are developing basic concepts that are the foundation of adult logical and abstract reasoning. Since young children's thought processes are still dependent on action and interaction with things, they need a wealth of time to play with raw materials, toys, games, adults and peers. They repeat actions over and over in efforts to gain mastery that is always more connected with their interaction with materials than with their concern about having a finished product.

The process of socialization through contact with children of their own age is critical for developing cognitive as well as social and emotional skills. Indeed, as much growth in the development of cognitive skills is fostered through collaboration with peers as through instruction from adults.

Pre-math and pre-reading skills evolve as children engage in play—with blocks, sand, water, dolls and other kinds of play.

Important learning ingredients for 3- and 4-year-olds are *time* in which to fully explore materials and ideas, and *questions* (rather than information) from the teacher to further their own inquiries.

Imagination and creativity are at a peak for 3- and 4-year-olds, and a wide variety of open-ended materials further supports their growth. Materials that can be arranged and rearranged provide avenues for creative expression as well as for emotions and feelings.

Mastery of one's body, a task that begins in infancy, is of prime importance in the nursery-school years. Repeated opportunities must be provided for young children to coordinate body movement with seeing, hearing, touching, smelling and tasting.

Since the out-of-doors affords many opportunities for both sensory exploration and freedom of movement, teachers are encouraged to use it for as many activities as possible.

The skills that we adults neatly categorize as social, emotional, physical and intellectual are not so neatly separated in growing children. These skills develop simultaneously, in an intricately interwoven network that cannot be taken out of context. The school environment for young children needs to be both flexible and integrated; accordingly, their materials need to be varied and multifaceted. It is

impossible to offer any one "right list" of equipment and materials for a nursery school program. The full-day nursery has different equipment needs from the half-day nursery and those two differ from the every-other-day arrangement. Also, because of an increasing awareness of children from different ethnic and cultural backgrounds and of children with special needs or handicaps, nursery school programs are meeting their special needs through the use of regular and specialized materials. With this in mind, the teacher must choose items based on the needs of the children and parents involved, the physical space available, and his/her own teaching style.

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

Note: Items, quantities and priorities suggested on the following pages of this section are to be thought of as guides rather than inventories.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
I BASIC ENVIRONMENTAL EQUIPMENT				
Benches for outdoor use to seat 8-10 children and adults			2	
Bookcase for children's books, on casters, 1 or 2 slanted shelves on top	1			
Bookshelf, for adult books, up high	1			
Bulletin boards, portable	2			
Cabinets:				
Movable, sturdy, with adjustable shelves for storage of curriculum materials, cleaning supplies, food, etc.	4			
Movable, sturdy, with rigid shelves, child height for self-help equipment and displays	2		2	
Chairs:				
Adult size:				
Desk	1			
Folding, for meetings	10	20	20	
Rocking	1			
Child size:				
Bean bag			1	
Rocking		1		
Stackable, light weight but sturdy, 1 per child, several for staff and visitors	30			
Chalkboard, portable, with chalk and erasers	1			
Clock, wall	1			
Counter or shelf for preparation of craft materials and food	2			
Cubbies:				
Indoor, wood, with bottom shelf, hooks above and 1 or 2 shelves at the top, 1 per child	20			
Outdoor storage space, approx. 10" x 10" x 12", for children's belongings—useful in warmer climates		20		
Drinking fountain, child height	1			
Filing cabinet, 2-4 drawers	1			1
Laundromat (See Housekeeping Supplies—Cleaning.)				
Loft, with rugs and pillows, high enough for children to stand under and adults to supervise				1
Peg board with pegs for storage/display	1			
Pillows	4			
Refrigerator	1			
Rugs, if room not carpeted, indoor/outdoor, approx. 9' x 12'	1	1		
Shed, outdoor, with cupboards, for storage of maintenance supplies and items such as hollow blocks, vehicles, sand-box toys, art materials, etc., rain and vandal-proof	1			
Shelf unit, for blocks, so individual sizes and shapes can be easily seen, chosen and put back by children and adults	1			

*Indicates that multicultural materials are suggested or should be included.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Sinks:				
Indoor, with counter space	1			
Outdoor, with counter space		1		
Sofa				1
Step-stool	1			
Stove	1			
Tables:				
Adult size:				
Seating 4, folding	1			
Seating 8-10, folding for meetings				2-5
Child size:				
Seating, 4-8, same height, so can be combined, 18" to 20" high	4			
Seating 8-10 children and adults, for outdoor use	1-2			
Serving cart	1			
Serving table				1
Toilet facilities:				
Lavatories, 28" high	3			
Toilet seats, 12" high	3			
Trash cans, with lids, large	2			
Wastebasket, large with lid	2			

II GENERAL MAINTENANCE, INDOOR/OUTDOOR

Broom, push, heavy duty for outside	1			
Buckets, 1 metal, 1 plastic, flat bottom, large	2			
Carpentry tools (See Building and Construction.)				
Electrical extension cord and plug, heavy duty	1			
Hardware kit: nails, nuts, bolts, sandpaper, screws, staples, washers, etc.	1			
Iron, electric	1			
Ironing board	1			
Ladders:				
Extension			1	
Stepladder		1		
Stepstool (See Basic Environmental Equipment.)				
Lawn mower, hand or power, if needed	1			
Light bulbs	12	12	12	
Painting supplies: alcohol, brushes, paint, shellac, turpentine, varnish, (items accumulated)	X	X	X	
Plunger	1			
Power tools, set				1
Rakes:				
Garden	1			
Leaf	1			
Rope, 4' to 8'	1			
Shovel or spade	1			
Trash cans with tight-fitting lids	1		1	
Trash bins	1			
Trouble light	1			
Twine, cone	1		1	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
III HOUSEKEEPING SUPPLIES				
Cleaning and Laundry:				
Brooms:				
Push	1		1	
Regular	1			
Brushes:				
Bottle	2	2	2	
Counter	1	1		
Toilet	1	1		
Cleansers:				
Glass cleaner, can	1	1	1	
Scouring powder, cans	12	12	12	
Cloths:				
Cleaning	6	2	2	
Dish	4	1	1	
Dishpan	2			
Drying rack, folding	1			
Fly swatter	1			
Garbage can with lid	1			
Iron (See General Maintenance, Indoor/Outdoor.)				
Ironing board (See General Maintenance, Indoor/Outdoor.)				
Mops:				
Dust	1		1	
Wet	1		1	
Pails or buckets (See General Maintenance, Indoor/Outdoor.)				
Plunger (See General Maintenance, Indoor/Outdoor.)				
Soap:				
Bar, doz.	3	3	3	
Flakes, box	3	3	3	
Liquid, qt.	3	3	3	
Powder, box	3	3	3	
Sponges, several sizes	6	6	6	
Strainer, sink	1			
Toilet paper, carton of 3,000	5	5	5	
Toilet protective tissue covers and dispenser, pkgs.				3
Towels:				
Bath, each child brings own	X	X	X	
Dish	12	12	12	
Hand	12			
Paper, case of 3,000	6	6	6	
Vacuum cleaner if floor is carpeted	1			
Vacuum cleaner bags, as needed	X	X	X	
Wastebaskets (See Basic Environmental Equipment.)				
Sewing:				
Buttons, assorted	25	15	10	
Cloth, variety of odds and ends	X	X	X	
Iron (See General Maintenance, Indoor/Outdoor.)				
Ironing board (See General Maintenance, Indoor/Outdoor.)				
Needles, assorted package	1		1	
Pins, roll	6	6	6	
Scissors and shears (See Creative Arts.)				
Sewing machine				1

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Tape measure	1			
Thimbles	2			
Thread, black and white, spools	2			
String, ball	1		1	
Yarn, ball	2		2	
IV HEALTH AND SAFETY				
First Aid Supplies:				
Cotton blankets, one per child	24			
First aid cabinet stocked in accordance with individual school regulations or with the following items:				
Antiseptic soap (Phisoderm)	2		2	
Band-Aids, boxes	6	6	6	
Eye bath	1			
Gauze, sterile, boxes	4	4	4	
Gauze pads, sterile, boxes	4	4	4	
Ice pack	1		1	
Medicine glass	1			
Nonallergenic adhesive tape	2	2	2	
Red Cross First Aid Manual	1			
Rubbing alcohol, bottle	1			
Safety pins, pkg.	1		1	
Thermometer, 1 oral, 1 rectal	2			
Tweezers	1			
Flashlight	1			
Handkerchiefs, paper, small hospital size, boxes	18	18	18	
Rugs, plastic covered foam mats or cots for resting, 27" x 48", or towels from home	24			
Soap, liquid (See Housekeeping Supplies.)				
Toilet paper (See Housekeeping Supplies.)				
Towels, paper, junior size, pkg. of 150	10	10	10	
Food Preparation and Service:				
Food and cooking are considered part of the education program for children and adults, as well as serving nutritional needs. Health standards and regulations must be observed. Items* are suggested only for schools that serve hot meals daily.				
Blender*	1			
Bottle opener	2		2	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Bowl scrapers, various sizes	2			
Bowls:				
Serving, unbreakable, assorted sizes	3			
Soup-cereal, plastic	30			
Soup, paper, for special foods or events			36	
Sugar	2			
Cake pans, unbreakable	4			
Canister, or other food containers, with lids	6			
Can openers:				
Electric	1			
Hand	1	1	1	
Coffee maker	1			
Colander	1			
Cookie:				
Cutter, assorted sizes, special shapes for holidays	12			
Decorator			1	
Sheets	4	1	1	
Corn popper, hand or electric	1		1	
Cups:				
Coffee, unbreakable, for adults	6			
Dispenser for paper cups			1	
Hot drink, disposable	48	48	48	
Paper, flat bottom, box of 100 5 oz.	6	6	6	
Cutlery:				
Forks:				
Heavy plastic, reusable, for special events	60			
Long handled	2			
Salad, stainless steel, for children and adults*	36			
Serving	3			
Knives:				
Bread	1			
Butcher	1			
Dinner, heavy plastic, reusable, for special events	60			
Paring	2	2		
Stainless steel, for children and adults	12-20			
Spoons:				
Coffee-dessert, heavy plastic	36			
Cooking, with long handles, unbreakable	3			
Serving	6			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Soup, stainless steel	6			
Teaspoons, stainless steel*	36			
Deep fat fryer				1
Double boiler*	2			
Egg beater, hand	1			
Electric mixer*	1			
Extension cord (See General Maintenance, Indoor/Outdoor.)				
Flour sifter	1			
Fry pans:				
Electric	1			
Regular, 6", 8", 10", 12"	1	1		
Funnels:				
Large	1			
Small	1	1		
Glasses, unbreakable:				
Large, 10 oz.	6			
Small, 6 oz.	24-36			
Grinder*			1	
Hot pads	4	2		
Hot plate, electric—stove, if full day	1			
Ice cream freezers:				
Electric			1	
Hand	1			
Ladles	2			
Measures:				
Bowls, nesting set, unbreakable	3			
Cups, unbreakable, sets	2			
Spoons, sets	2			
Napkins, paper, buy in quantity	X	X	X	
Oven, portable, if no stove available		1		
Pepper grinder			1	
Pepper shakers	1			
Pie pans, unbreakable	6			
Pitchers, unbreakable:				
Cream	1			
Pt. size	4			
1-2 qt. size	4			
Plates:				
Dessert, paper	48		48	
Dessert, plastic, 1 per person plus several for guests*				36
Dinner, heavy plastic*	36			
Dinner, paper	36			
Serving, assorted sizes	4	2		
Pot holders	4		2	
Rolling pins, additional ones for children's use	2			
Salad bowl and servers*	1			
Salt shakers, incl. one for stove	4			
Sauce pans, 1 qt., 4 qt., 6 qt., with lids*	4			
Serving cart (See Basic Environmental Equipment.)				
Sieves:				
Large	1			
Small	1			
Spatulas, assorted sizes	3			
Storage containers:				
Freezer*	2			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Refrigerator	4			
Tablecloths, plastic, to be used for meals or cooking activities, one for each table	X			
Table mats, plastic, if desired		24		
Teakettle	1			
Tongs	1			
Trays, assorted sizes	6			
Vegetable peeler	1			
Warming tray, electric			1	
Resting Facilities: (If desired.)				
Cots, aluminum frame, washable canvas, stackable	X	X	X	
Blankets, cotton (See Health and Safety, First Aid.)				
Resting mats	X	X	X	
Room dividers	X	X	X	
Sheets, cot size	X	X	X	
V AUDIOVISUAL EQUIPMENT				
Films (access to)				
*Filmstrips	6	2	2	
Filmstrip projector		1		
Headphones				2-4
Jack for headphones				1
Movie and sound projector, 16mm (access to)				
Record player (See Music.)				
*Records (See Music.)				
Slide projector (access to)				
*Slides (access to)				
Tape recorder	1			
*Tapes or cassettes for listening and recording	4	2	2	
VI PSYCHO-MOTOR DEVELOPMENT				
Balance beam with supports		1		
Balls, rubber, 4", 6", 8", 10", 12"	4	1	1	
Barrels	1		1	
Bean bags	20		5	
Bicycle pump	1			
Boards:				
Resilient, for jumping	2		1	
Plain, 6'-8'	3		2	
Cleated, 4'-6'	1	1		
Boxes, large, wooden	2			
Bridges, set of nesting, metal sawhorse type, set		1		
Climbing structures: old tires, empty electrical reels, concrete culvert units	2		1	
Crawl through tunnel or cubes, large	1			
Crates, packing boxes	1	1	1	
Digging hole	1			
Dollies, hand	1	1		
Fences, portable, 6' lengths		3		
Hoops, 18" to 24" in diameter	20			
Hose, length as needed	1			
Ladder, lightweight, sturdy for children, 4' to 6'	1			

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Net, cargo, for climbing		1		
Pails, assorted sizes, for outdoor play	3			
Platform with railing, ladder, sliding pole, storage or play space underneath		1		
Playhouse frame				1
Pulleys	1	1		
Recordings, suggesting gross and fine muscle activities	4			
Rope, 6' to 8' length	1		1	
Sandbox frame with sand (water faucet and hose nearby)	1			
Sawhorses, assorted sizes	2			
Shovels, small but sturdy	4			
Slide, portable or attached to climbing structure (Long board can be used for sliding.)		1		
Steering wheel, to fit on block or frame		1		
Step platforms, if steps not otherwise available		2		
Stick horses		2		
Swing set, double with canvas or rubber seats	1			
Swing, tire		1		
Tubs, metal, different sizes	1	1		
Tumbling mats		1	1	
Wands	10	10		
Wheel toys:				
Tricycles	2	1		
Tricycle trailers	1	1		
Wagons	2			
Wheelbarrow		1		

VII PERCEPTUAL DEVELOPMENT

Beads, wooden, 1/2" cubes and assorted shapes, box of 1,000	1			
Bead counting frame, abacus (See Mathematics.)				
Bead laces	12		6	
Counting rods, sets	2			
Dressing frames	4			
Games, matching:				
Card: animals, geometric shapes, flowers, vehicles, etc.	4	1	1	
Block: attribute, design, domino, number, property, etc.	4	1	1	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
*Frame: bingo and lotto type with birds, flowers, food, clothing, zoo animals, etc.	4	1	1	
Felt board (See Language Arts.)				
*Felt board figures (See Language Arts.)				
Geometric solids, wooden (See Mathematics.)				
Magnetic board, 18" x 36"	1			
Magnetized figures, 50 items, set	1			
Mechanical board: bolts, nuts, locks, etc.	1			
Nest of rings or boxes, 6 to 8 items	1			
Olfactory materials: spices, foods, greenery, etc. in plastic bottles with perforated, tightly sealed lids	X	X	X	
Parquetry blocks (See Building and Construction.)				
Pegboards (See Mathematics.)				
Pegs (See Mathematics.)				
Puzzles (See Language Arts.)				
Shape or sorting box with interchangeable panels	1			
Sound cylinders, approx. 3" high, 2" diameter, set of 5	2			
Tactile materials: sandpaper, cloth, wood, metal, sponge, etc., in container	X	X	X	
*Taste materials: sugar, flour, salt, fruit juices, etc., in plastic containers with removable lids	X	X	X	
Weighing and measuring items (See Mathematics.)				

VIII BUILDING AND CONSTRUCTION

Bin for lumber			1
Blocks:			
Hollow	30		20
Parquetry, set	2		1
Table, choose from cube, interlocking, nesting, regular small sets in variety of materials: wood, plastic, rubber	3	2	1
Unit, full school set (protected floor space and appropriate shelving important)	150	150	150

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Boards, small flat 24"-36" long, to use with blocks	4		2	
Building sets: (Choose from such as the following in school size sets of sufficient quantities to satisfy needs.)				
Crystal Climber	1			
Giant tinker toys			2	
Lego	2			
Lincoln Logs		1		
Rig-a-jig	1			
Rising Towers	1			
Tinker toys		1	1	
Carpentry: (All tools real adult, not toy.)				
Bench	1			
Bits, ¼", ½", and ¾"	1	3		
Brace, adult size, 1½lbs.	1	1		
Coping saw, wooden handle	1		1	
Coping saw blades	1		6	
Hammers, 13 oz., 16 oz., flat head with claws	2			
Hand drill and drill sets	1			
Measuring rod, tape, ruler, one of each	3			
Nails, assorted sizes, ½" to 2", some very long, lbs	5	5	5	
Nuts and bolts, assorted, box	1		1	
Pliers	1			
Sandpaper, medium grit, pkg.	1			
Saws, crosscut, 14" blade, 18" blade, 8 teeth per inch	2			
Screwdrivers, 8", 12", regular and Phillips	2			
Screws, steel, flat head, assorted sizes, box of 50	2		1	
Washers, assorted sizes, box		1		
Cloth, yds.	2	2	2	
Corks, supply accumulated	X	X	X	
Foam rubber pieces, supply accumulated	X	X	X	
Glue, tubes	1	1	1	
Lumber:				
Assorted shapes and sizes, soft, scrounged (often available from lumber yard disposal bins and carpentry shops) 50-75 pieces	X	X	X	
Assorted sizes, rough measure footage, 30'-60', purchased	1	1	1	
Puzzle frame/holder	1			
Puzzles (See Language Arts.)				
Rope (See Psycho-Motor Development.)				
Sandbox (See Psycho-Motor Development.)				
Sand/water play materials, all unbreakable:				
Brushes, large	3		3	
Containers, wide variety	6	6	4	
Dishes, variety	4	4	4	
Dishpans	1	1		
Floating toys and objects	4		2	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Funnels, assorted sizes	2		1	
Hose, small pieces, can be scrounged	2		1	
Measuring sets:				
Cups	2			
Spoons	2			
Molds, assorted	3	2	1	
Pails, assorted sizes (See Psych-Motor Development.)				
Pitchers	1		1	
Scoops	4	2	2	
Sieves	2			
Soapflakes, box	2	2	2	
Sand/water table or tray	1			
Shellac, clear, qts.	1		1	
Straws, plastic, pkg.	1	1	1	
String (See Housekeeping Supplies.)				
Tongue depressors or craft sticks, pkg. of 1,000	1		1	
Toothpicks, colored box	1	1	1	
Twine (See General Maintenance, Indoor/Outdoor.)				
Vehicles:				
Construction, large, sturdy, variety	3		1	
Transportation, unbreakable, in various sizes	6	2	2	
Wheels, wooden discs	6	4	2	
IX CREATIVE ARTS				
Aprons, plastic or cloth, homemade	10	6	6	
Beads, and other objects for stringing	500	250	250	
Brushes, paint, ½"-1" thickness, handle length, 6"-9"	12	6	6	
Cans, cookie cutters, for cutting dough, assorted sizes	4	2	2	
Chalk:				
Assorted colors, large, box	2	1	1	
White, box	1	1	1	
Clay, gray and red, lbs. each	25	25	25	
Cloth:				
Like old sheeting to paint/draw on, supply accumulated	X	X	X	
Plastic drape, one for each table	X	X	X	
Burlap and/or heavy weight mesh for stitchery, yds.	2	2	2	
Clothes pins, for hanging art work	48			
Collage materials, scrounged such as pieces of cloth, paper, leather, plastic, old greeting cards, buttons, styrofoam, yarn, ribbon, sequins, glitter, beads, etc., supply accumulated	X	X	X	
Cotton balls, bags	4	4	4	
Containers:				
For clay, plastic with lid	2			

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
For collage materials: old boxes, baskets, jars, etc., supply accumulated	X	X	X	
For paint: small cans, cut down cartons, plastic, with lids	10	5	5	
Cookie cutter, for use with play dough	12		6	
Crayons, jumbo, assorted colors, boxes	10	5	5	
Crayon holders	2			
Drying rack for art materials, if needed	1			
Easels:				
Community, for outdoor use, if space available			1	
Double adjustable	2			
Garlic presses for use with clay	2			
Glue, white, inexpensive (See Building and Construction Materials.)				
Hole puncher	1			
Kiln (access to)				
Knives, table, for use with clay and dough (can be old)	6		4	
Laces for stringing (See Perceptual Development.)				
Looms, handmade out of cardboard, paper plates, wood and nails, for simple weaving	2	2	2	
Marking pens, non-toxic	6	6	6	
Masking tape, roll	4	4	4	
Paint:				
Finger, commercial, pts.	6	6	6	
Finger (Make as needed out of starch, water, tempera and soap flakes.)	X	X	X	
Liquid tempera, assorted colors, qts.	10	10	10	
Powdered tempera, assorted colors, boxes	6	6	6	
Watercolors, boxes with brushes	2	2	2	
Paint jars, plastic with lids	16 +			
Paper:				
Brown, wrapping 45 lb. roll with dispenser	1			
Construction, colored, 9" x 12", pkg. of 50 sheets	20	20	20	
Construction, colored, 12" x 18" pkg. of 50 sheets	8	8	8	
Crepe, 20" x 7½", pkg.	2	2	2	
Frieze, one side glazed, other side rough, 24" x 180', roll	1			
Manila for drawing, 12" x 18", reams	8	8	8	
Poster, colored, 9" x 12", pkg. of 100 sheets	20		20	
Poster, colored, 12" x 18", pkg. of 100 sheets	4	4	4	
Tagboard, medium weight, 24" x 36", sheets	10		10	
Tissue, 20" x 30", pkg. of 24 sheets	4	4	4	
News, unprinted, 18" x 24", pkg.	15	15	15	
Paper brads or fasteners, boxes	2		2	
Paper bags, approx. 8" x 14"	20	20	20	
Paper clips, box of 100	4	4	4	
Paper cutter, 12" blade	1			
Paste, semi-liquid, gal.	2	2	2	
Paste jars, 2" diameter, 1½" deep, with covers	10			
Pastesticks, hardwood, pkg. of 500	1		1	
Pencils, soft, thick lead, without erasers	12	12	12	
Pencil sharpener	1			
Pie tins or other containers, for children to use in mixing paint	6		6	
Pins:				
Safety, medium size, box of 100	1	1	1	
Straight (See Housekeeping Supplies.)				
Pipe cleaners, assorted colors, pkgs.	2		2	
Plasticine, single color, lbs.	5	5	5	
Play dough, can be made or purchased, as needed	X	X	X	
Potter's wheel (access to)				
Printing materials for play dough, clay, and paint, assorted kinds: cut vegetables, spools, blocks, etc., supply accumulated	X	X	X	
Rolling pins for play dough	4	2		
Rulers (See Mathematics.)				
Rope, for hanging art work, approx. 12'		1		
Salt, for cooking and making play dough, boxes	2	2	2	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Sand:				
Indoor sandbox, white, fine, lbs., or cornmeal or sawdust in comparable amounts	200			
Outdoor sandbox, coarse, lbs.	800			
For painting, lb.	2	2	2	
Scissors:				
Double handled training, child-size	2			
Rounded, one pair left-handed, child-size	8		2	
Semi-pointed, one pair, left-handed, child-size	8		2	
Shears, pair, adult-size	1			
Scotch tape, rolls	4	4	4	
Soap:				
Flakes, to whip for painting (See Housekeeping Supplies.)				
Liquid, to put in paints (See Housekeeping Supplies.)				
Sponges, to be cut into pieces approx. 1" x 2" x 2" for painting	2	1	1	
Squeeze bottles, supply accumulated	X	X	X	
Staple remover	1			
Stapler	1			
Staples, box	2	2	2	
Starch for mixing finger paint, boxes	2	2	2	
String and twine, for collages, painting and weaving (See Housekeeping Supplies.)				
Thread, black and white, spools, (See Housekeeping Supplies.)				
Tape, Mystic, cloth with plastic finish, 3" wide x 108", roll	1		1	
Tongue depressors or craft sticks, for use with clay, collage and dough, box (See Building and Construction Materials.)				
Toothpicks, for painting and use with clay, collage and dough, (See Building and Construction Materials.)				
Water color markers, non-toxic, water soluable, pkg.	3	3	3	
Wheat paste, lbs.	1	1	1	
Wood pieces for collage and construction, scrounged, supply accumulated	X	X	X	
Yarn for collage, stitchery and weaving, scrounged and balls	4	4	4	

X DRAMATIC PLAY

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Animal:				
Costumes, homemade or scrounged		2	2	
*Figures, small, plastic/rubber a variety in quantity for use with blocks and sand/water play	16		8	
*Puppets, assorted	6	1	1	
Stuffed animals	4		2	
Camping:				
Backpack, from surplus store	1			
Blankets				2
Camper truck			1	
Flashlight (See Health and Safety, First Aid.)				
Lantern		1		
Pup tent		1		
Sleeping bag		1		
Stove			1	
Utensils	4		2	
Doctor/Nurse:				
Bandages/band-Aids, kit	1		1	
Hospital gown and uniform, one of each		2		
Instruments:				
Sphygmomanometer for blood pressure		1		
Stethescope		1		
Mirrors:				
Angle				1
Head		1		
Mask		1		
Grooming-toilet articles: male and female, comb, hair brush, hair rollers, hand mirror, nail brush, manual razor without blades and/or electric razor with plug off, shaving brush, soap	X	X	X	
Home Management and Family Living:				
Bathing and cleaning:				
Aprons, plastic (See Creative Arts.)				
Bathinette		1		
Bottle brush	1			
Broom, child size	1			
Dishcloth	2			
Dishpan		1		
Drainer		1		
Dry mop	1			
Dustpan	1			
Iron, wood or plastic	1			
Ironing board		1		
Pail	1			
Soap, hand (See Housekeeping Supplies, Cleaning and Laundry.)				
Soap flakes, sample boxes	1	1	1	
Towels:				
Bath	1			
Dish	2			
Hand	2			
Washcloths	2			
Vacuum cleaner, 30" handle				1
Washer, dryer, approx. 16" x 16" x 24"				1
Wet mop, 30" handle	1			
Cooking and eating equipment, real unbreakable:				
Baby bottle	2			

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — A
Replacements and Additions
Second Year — B
Replacements and Additions
Third Year — C
Luxury Items — D

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Cutlery: forks, knives, spoons, place settings	4			
Dishes: bowls, cups, saucers, small glasses, plates, place settings	4			
Food containers, empty	X	X	X	
Food, pretend	6		4	
Utensils: cake pan, colander, frying pan, kettle, ladle, large spoon, measuring cups and spoons, mixing bowls, pie pan, sauce pan, sieve	8	2	2	
*Dolls, baby boy, girl, multi-ethnic, multi-cultural, unbreakable, washable				
Doll play and equipment:				
Baby bottles	2			
Bed	1			
Buggy and stroller	1	1		
*Clothes, assorted, male, female, baby, older, various fastenings	12	4	4	
Dishes, place settings	2	1		
Doll house, open on sides, top removable			1	
*Doll house dolls: families, multi-ethnic, mutli-cultural, bendable preferred, to use also with blocks, vehicles, sand/water play		4	4	
House cooking utensils, for doll house				6
Doll house furniture and accessories			16	
*Dress-up properties, male and female: aprons, belts, billfolds, blouses, dresses, hats, hose, jackets, jewelry, pants, purses, scarves, shawls, shoes, skirts, suitcase, ties, watches, wigs, supply accumulated	X	X	X	
Furniture for playhouse area, sturdy, unbreakable:				
Bed and matress, big enough for child to curl up on	1			
Bed linens: blankets, pillow, sheets, spread	4	2		
Chairs:				
High chair with tray	1			
Rocking	1			
Straight	4			
Clothes rack and hangers		1		
Curtains, as desired	X	X	X	
Dresser or chest	1			
Hat rack		1		
Mirror, full-length, child height	1			
Radio				1
Refrigerator	1			
Rug, if desired	X	X	X	
Sink	1			
Sofa				1
Stove	1			
Table, to seat four children	1			
Telephone	1			
T.V. frame, scrounged				1
Toilet training chair				1
Office and School:				
Attaché case, scrounged	1			
Chalkboard		1		
Chalkboard eraser		1		
Desk and desk chair		1		
Paper pads	2	2	2	
Pencils and erasers	2	2	2	
Telephone (See Home Management and Family Living.)				
Typewriter, scrounged		1		
Playhouse, outdoor	1			
Puppets, family, hand or finger	4	2	2	
Repair and Yard Work:				
Carpentry apron	1			
Lawn mower, 24" handle			1	
Paintbrushes				
Paint cans containing colored soapsuds	3			
Push broom		1		
Rake, 24" handle				
Sewing Materials: buttons, cloth pieces, decorations (pieces of lace, ribbon, beads), large needles, rounded scissors, thread, yarn, scrounged	X	X	X	
Toolbox			1	
Tool kit		1		
Transportation/Occupations: buy and scrounge				
Dress-up clothes: hats, uniforms, tools for a variety of occupations, such as bakers, bus drivers, carpenters, divers, en-				

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
gineers, fire fighters, air pilots, police officers, sailors, taxi drivers, train engineers, postal workers, construction worker	X	X	X	
Model sets: airport, camper, fire station, garage, space center, etc., with proportioned buildings, figures, furnishings, tools, vehicles			4	
*People figures, proportioned plastic, rubber, wood, representing a variety of workers	6	3	3	
*Puppets, representing different workers	4	2	2	
Snap train sets			2	
Traffic signs for air terminals, highways, railroad crossings, waterways		5		
Vehicles, large, sturdy, some ridable, some that carry blocks: cars, boats, planes, rockets, trains, trucks, tractors (See Building and Construction.)				
Vehicles, metal or plastic, small, wheeled, that fit unit blocks (See Building and Construction.)				
XI MUSIC				
Autoharp	1			
Dancing clothes: scarves, skirts, streamers, supply accumulated	X	X	X	
Records: permanent collection of quality children's records and access to others (See Audiovisual Equipment.)				
Record player, good but inexpensive (See Audiovisual Equipment.)				
Rhythm Instruments:				
Bells, variety: ankle, cow, wrist, melody set, supply accumulated	X	X	X	
Castanets	2			
Cymbals:				
Finger		2		
Large		1		
Drums, variety: snare, tom-tom, etc., can be homemade	2		1	
Maracas	4			
Piano		1		
Recorder, wind instrument			1	
Sticks, rhythm	12			
Tambourines	2			
Tone blocks, set		1		
Triangles		1		
Tuning fork			1	
Wood blocks		2		
XII LANGUAGE ARTS				
Alphabet letters, moveable, sandpaper, tactile, in several sizes	300		300	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
*Books:				
Permanent collection of 30 or more, and circulating collection borrowed from library. Choose high quality children's books, look for multi-cultural, multi-ethnic, non-sexiest content. Topics to include:				
Animals				
Child activities				
Community				
Fairy tales				
Fantasies				
Holiday				
Mother Goose				
Seasonal				
Tender topics—adoption, divorce, illness	X	X	X	
*Easy to read books	X	X	X	
*Picture books, including alphabet books and dictionaries	X	X	X	
*Poetry to read aloud	X	X	X	
*Resource books on such topics as biological science, community, crafts, cultures, family, geography, holidays, physical sciences, space science	X	X	X	
Camera for snapshots of children, etc.	1			
*Cassette tapes (See Audiovisual Equipment.)				
Chalkboards, portable, with chalk and erasers	1			
Chart paper, large, for experiences	2	2	2	
Felt board	1			
Felt board pieces: alphabet, stories, animals, familiar objects, etc. pkg. of 50 items	1			
Films (See Audiovisual Equipment.)				
Filmstrips (See Audiovisual Equipment.)				
Games, simple, such as lotto and other picture games	4	2	2	
Language Master				1
Notebooks for dictated stories	3	3	3	
Perception cards, set	1	1	1	
*Pictures and posters (See topics under Books.)	12	6	6	
Puppet theater	1			
*Puppets (See Dramatic Play.)				
*Puzzles, wooden, 9 to 16 pieces	8	3	2	
*Records (See Audiovisual Equipment.)				
*Slides (See Audiovisual Equipment.)				
Talking book unit			1	
Typewriter, primary			1	
Writing materials: crayons, pencils, marking pens (See Creative Arts.)				

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — A
Replacements and Additions
Second Year — B
Replacements and Additions
Third Year — C
Luxury Items — D

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
XIII MATHEMATICS				
Abacus		1		
Attribute blocks, set		1		
Counters, unbreakable: animals, beads, blocks, buttons, cards, nails, napkins, etc., supply accumulated	X	X	X	
Cuisinaire rods, set			1	
Fraction manipulatives, wood or plastic, apple, candy bar, pie, etc.		3		
Food to cut and divide	X	X	X	
Geometric figures, wooden, 3" units, approx. 6 items, set	1			
Measuring equipment, English and Metric:				
Dry units	4	2		
Liquid units	4	2		
Tape	1			
Rulers	2			
String, twine, rope (See General Maintenance, Indoor/Outdoor.)				
Thermometers:				
Cooking				1
Hand manipulated model	1			
Indoor/Outdoor	1			
Money, play, homemade	X	X	X	
Nesting toys, assorted boxes, blocks, dolls, units (See Perceptual Development.)				
Number games	4	2	2	
Numerals, tactile in variety of sizes and materials	20		10	
Objects: any in environment to examine their properties, likenesses and differences	X	X	X	
Peg boards, 12" x 12"	4			
Pegs, hardwood, ½" diameter, 2" long, box of 1,000	1			
Shapes, basic sets, tactile, unbreakable, variety of sizes and materials, supply accumulated	X	X	X	
Sorting containers, unbreakable: baskets, boxes, cans, glasses	3	2	1	
Timers, buy or scrounge, as needed for curriculum:				
Calendars	2			
Clocks:				
Alarm, hand wound	1			
Electric, wall	1			
Plywood, with geared, adjustable hands	1			
Egg timer		1		
Food timer	1			
Watch	1			
Weights, English and Metric:				
Standard pan balance		1		
Graduated cylinder balance			1	
Bathroom scale	1			
Kitchen scale	1			
Spring scale		1		
XIV SCIENCE				
Air Experiments: (Obtain as needed each year.)				
Balloons	6	6	6	
Bellows		1		
Bicycle pump (See Psycho-motor Development.)				
Bubble pipes	20			
Kite		2		
Squeeze bottles, supply accumulated	X	X	X	
Straws	24	24	24	
Tubing, 3' length	1		1	
Animals: Follow all public health and safety laws and regulations, provide adequate food, medical care, shelter. Choose from:				
Baby chicks		6-12		
Ducks		2		
Fish	4	4	4	
Gerbils (where permitted by law)		2+		
Guinea pigs		2+		
Hamsters	2+			
Insects, silk worms	3	3	3	
Mice		2+		
Parakeet	1			
Rabbits	2+			
Rats			2+	
Snails	5			
Snakes			2	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Sponges, living			2	
Aquarium	1			
Animal foods that are appropriate for any of the above	X	X	X	
Eggs and incubator	4-6			
Cooking equipment (See Health and Safety.)				
Grow chart, height, weight	1			
Food and Gardening:				
Use of food in science is essential to a child's experiencing the changes of state in matter. (See also Health and Safety.)				
Aprons (See Creative Arts.)				
Children's cookbook	1			
Containers: bottles, cartons, flower boxes, flower pots, jars, etc., suply accumulated	X	X	X	
Cotton, box	1			
Dirt box or dirt plot	1			
Fertilizer, lbs.	5			
Food:				
Natural foods, fruits, nuts, vegetables	X	X	X	
Packaged mixes and processed foods, pkg.	4	2	2	
Raw ingredients: flour, salt, soda, spices, sugar, etc., in tightly covered containers, one for each item	X	X	X	
Garden tools, child size: hoe, rake, spade, set	1	1		
Plants, cultivated and wild	X	X	X	
Seeds, collected from nature and purchased, supply accumulated	X	X	X	
Stakes and string or wire fencing	X	X	X	
Terrarium	1			
Watering cans or hoses	2	1		
Light and Heat:				
Binoculars, pair				1
Camera (See Language Arts.)				
Electricity: batteries, bulbs, buzzers, simple circuits, supply accumulated	X	X	X	
Flashlights (See Health and Safety.)				
Magnifying glasses, hand	2			
Magnifying glasses on stand		1		
Microscope				1
Mirrors, unbreakable	2			
Prisms, assorted	2	1		
Liquids and Supplies:				
Liquids:				
Ice:				
Dry, bar				1
Regular	X	X	X	
Oil, ½ pt. can	1			
Other liquids	X	X	X	
Supplies:				
Containers, plastic, supply accumulated	X	X	X	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Kettle	1			
Medicine dropper	2	1		
Paper:				
Blotting, odds and ends	X	X	X	
Filter, pkg.				1
Sponges	2	2	2	
Sprayer		1		
Squeeze bottles, supply accumulated	X	X	X	
Squirt bottles, for spraying, supply accumulated	X	X	X	
Mechanics and Physics: (See Building and Construction Materials and Mathematics.)				
Inclined planes	1	1		
Magnets, variety of shapes and sizes, and things to try to pick up	2	1	1	
Nails, nuts, bolts, screws (See Building and Construction.)				
Rubber bands, elastic (See Office Supplies and Record Keeping.)				
Siphon	1			
Take-apart equipment (donated): old clocks, typewriters, vacuum cleaners, etc., supply accumulated	X	X	X	
Wheels	4	1	1	
Minerals: rocks, stones, etc. (See also Building and Construction, Math, Music and Creative Arts.)				

XV OFFICE SUPPLIES AND RECORD KEEPING

Manila envelopes, 2 sizes	36	36	36	
Manila folders	36	36	36	
Marking pens, several colors	4	4	4	
Microcomputer			1	
Paper clips, 2 sizes, boxes	2	2	2	
Paper cutter (See Creative Arts.)				
Pencils, boxes	6	6	6	
Pencil sharpener (See Creative Arts.)				
Pins:				
Safety, box (See Creative Arts.)				
Straight, roll (See Creative Arts.)				
Rubber bands, assorted sizes, boxes	4	4	4	
Rulers (See Mathematics.)				
Staplers and staples (See Creative Arts.)				
Stationery, letterhead and plain, 2 sizes, quire of each	10	10	10	
Tapes:				
Masking, roll (See Creative Arts.)				
Mystic, roll (See Creative Arts.)				
Transparent Scotch, rolls (See Creative Arts.)				
Transparent tape dispenser	1			
Thumbtacks, boxes	8	8	8	
Typewriter		1		

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Nursery School Group

16–20 CHILDREN — AGES 3–5

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Writing paper tablets, ruled and unruled, in several sizes	8	8	8	
Xerox copier (access to)				
Yardstick	1			
XVI TRANSPORTATION				
For field trips and emergencies. Check local/state laws regarding insurance and licensing for carrying children in private car with and without school bus license.				
Private cars: (access to)				
Parent	4	4	4	
Staff	4	4	4	
Public transportation	X	X	X	
School bus, owned by school	1			
Station wagon, owned by school		1		

Emily Johnson and LaVisa Cam Wilson,
Early Childhood Committee
Committee Chairperson, Diane Pitmon

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR: A Kindergarten Group

20–24 CHILDREN — AGES 4–6

INTRODUCTION
I BASIC ENVIRONMENTAL EQUIPMENT
II HOUSEKEEPING EQUIPMENT AND SUPPLIES
III FIRST AID AND HEALTH
IV AUDIOVISUAL SUPPLIES (SEE LANGUAGE ARTS.)
V PSYCHO-MOTOR DEVELOPMENT
VI PERCEPTUAL DEVELOPMENT
VII REPRESENTATIVE PLAY AND SOCIAL AWARENESS
VIII ART AND CONSTRUCTION
IX MUSIC
X LANGUAGE ARTS
XI MATHEMATICS
XII SCIENCE
XIII SNACKS AND SPECIAL OCCASIONS
XIV RECORD KEEPING

Because today's kindergarten children are exposed to a great deal of audiovisual stimulation, they sometimes astound their elders with their fund of information and their seeming sophistication.

Many parents, administrators and even psychologists assume, therefore, that 1st-grade and even more advanced challenges should be introduced into the kindergarten program. Teachers who work with kindergarten children realize, however, that in spite of the children's apparent sophistication many of them tend to be bewildered and confounded by life. They often verbalize fluently but do not have any clear-cut concepts about what they have expressed. One of the most important services the kindergarten can perform is to help children to sort out and mesh old and new learnings; i.e., to clarify and extend their concepts.

With these considerations in mind, the following equipment and materials list is designed to aid adults in helping children develop the cognitive, psycho-motor, perceptual and social skills needed to make the most of their native abilities.

Obviously, the list is suggestive only. The geographic and cultural impacts of each school community and the composition of each kindergarten group will be factors in the selection of the specific equipment and materials that best serve the needs of the children, including the handicapped.

In helping children clarify and extend their concepts, the kindergarten teacher should feel free to cut through and across great bodies of knowledge. No hard and fast demarcations of subject areas are intended in this listing. Some of the items have been grouped under subject-matter headings only for the sake of convenience and to heighten public awareness that the kindergarten is an integral part of the elementary school.

The many teaching-learning kits that are flooding the market have not been included for two reasons: 1) in all probability kindergarten children can learn as much, if not more, from coping with firsthand environmental challenges than they can from being involved in contrived kit and workbook activities; 2) to date there is no conclusive evidence to indicate that rigidly structured teaching in the kindergarten enhances either the quality of living or the proficiency of later performance.

In addition, and as substitutes for the items suggested in this listing, it is hoped that teachers will be ever attuned to the educational implications to be found both in immediate daily experiences and the never-ending supply of scroungeable materials.

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Kindergarten Group

20–24 CHILDREN — AGES 4–6

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

Note: Items, quantities and priorities suggested on the following pages of this section are to be thought of as guides rather than inventories.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
I BASIC ENVIRONMENTAL EQUIPMENT				
Block storage units, each 10 to 12 cu. ft.	2			
Bookcase, 9 to 12 cu. ft.	1			
Bulletin Boards:				
Cork, 20 to 30 sq. ft.	1			
Steel, baked enamel finish, 4-6 sq. ft.	1			
Chairs, adult size:				
Regular, seat height 17"	2			
Rocking	1			
Chairs, child size:				
Armchairs, 2 rocking, 2 straight, modern or wicker, seat height 12", for library	4			
Rocking, wooden or plastic, 10" to 12" seat height	1		1	
Straight, wooden or plastic, metal tubing, seat height 11", 12", 13"	24			
Chalkboard, green, 12 to 18 sq. ft.	1			
Clock, electric wall, Arabic numerals	1			
Cupboard units, total storage area 125 to 200 cu. ft.	2			
Desk, small, adult size, or table and a two-drawer file	1			
Draperies or blinds for windows, as needed	X	X	X	
Drinking fountain, slant stream, 27" basin height	1			
Fire extinguisher, 6 lb. model, flat bottom	1			
Floor covering:				
Carpet for ⅔ of area, indoor-outdoor type, yeardage as needed	X			
Linoleum for ⅓ of area, yardage as needed	X			
Lockers, wooden, approx. 12" x 14" x 54"	24			
Mirror, approx. 15" x 45"	1			
Mountings or frames for children's artwork	5			
Paper towel container	1			
Pictures and wall hangings, good quality	2	1	1	
Puzzle rack	1			
Sand table, approx. 3' x 6' x 26" overall, box 10" to 12" deep, with cover and plastic liner	1			
Screens:				
Pegboard, 36" x 48" with removable feet		1		
Hinged unit, three panels, each 18" x 54"			1	
Soap dispensers for liquid soap	2			
Storage space unit for wood, 20" x 24" x 3 ½' long	1			
Tables:				
Library, plastic top, 36" diameter, 18" to 20" high	1			
Playhouse (See Representative Play and Social Awareness.)				
Serving, use finished plywood board 28" x 46" on top of workbench or covered sandbox	1			
Work, plastic top, non-reflecting surface, 30" x 30" and 18" to 21" high	6			
Toilet Facilities:				
Lavatories, 28" high	2			
Toilet seats, 12" high	2			
Tool storage unit, wall hangings, with door, approx. 24" x 36" and 6" deep	1			
Wastebaskets, approx. 10" x 14" x 18" deep or larger, with disposable liners	2			
Workbench, 24" x 42" and 26" high with 2 vises	1			
Xerox copier (access to)				
II HOUSEKEEPING EQUIPMENT AND SUPPLIES				
Brooms:				
Corn, straight, light weight, adult size	1			
Push, long handle	1			

*Indicates that multicultural materials are suggested or should be included.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Brushes:				
Counter style, 12" handle	1			
Hand/scrub style, 5"	2	2	2	
Whisk broom, small	1			
Cleanser, scouring powder, cans	4	4	4	
Dishpan, plastic	1			
Dustcloths	2	1	1	
Dustpan, rubber or rubber edged	1			
Mop, sponge, small, light weight	1	1	1	
Pails or buckets, 1 metal, 1 plastic, flat bottom, 2 qt. size	2			
Soap or detergent, plastic containers	3	3	3	
Sponges, 1" x 3" x 4" or in animal shapes	2	2	2	
Towels, paper, carton of 3,000	5	5	5	
Vases or bowls with flower holders	3	1		
III FIRST AID AND HEALTH				
Cotton blankets, each	24			
Eye bath	1			
Flashlight	1			
First-aid cabinet, stocked in accordance with individual school regulations or with:	1			
Band-Aids, boxes	4	4	4	
Gauze, sterile, boxes	2		2	
Gauze pads, sterile, boxes	2	2	2	
Ice pack		1		
Medicine glass	1			
Nonallergenic adhesive tape	2		2	
Red Cross First-Aid Manual	1			
Rubbing alcohol, bottle	1			
Safety pins	1		1	
Soap:				
Antiseptic soap (Phisoderm)	2		2	
Liquid, gal.	1	1	1	
Thermometer, oral	1			
Tweezers	1			
Paper:				
Handkerchiefs, small hospital size, boxes	12	12	12	
Toilet, rolls	36	36	36	
Towels (See Housekeeping Equipment and Supplies.)				
Rugs, plastic covered foam mats, or cots for resting, 27" x 48", or towels from home	24			
IV AUDIOVISUAL SUPPLIES (SEE LANGUAGE ARTS.)				
V PSYCHO-MOTOR DEVELOPMENT				
Balance beam	1			
Balls, rubber, 4", 6", 8", 10", 12" in diameter	5	2	2	
Bean bags	24		5	
Cargo net	1			
Climbing rope, 8'			1	
Climbing tower, approx. 4' x 4' x 7' high, with 4 cleated board, approx. 8" x ¾" x 4'	1			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Crawl through cubes or tunnels, large	1			
Hollow blocks (See Art and Construction.)				
Hoops	24	2	2	
Ladders:				
Rope, wooden rungs with snap hitch unit, 4' to 6'		1		
Wooden, approx. 6'	1			
Parachute		1		
Planks, 6" x ¾" x 5', free from slivers	4			
Recordings, suggesting gross and fine muscle activities	4	2	2	
Romper Stompers, pairs	4			
Sandbox, outdoor, approx. 8' x 8' x 14" deep, with cover	1			
Skipping ropes, solid wooden handles	2			
Slide, wooden trough, 8' stand	1			
Swings:				
Rope, canvas or air cushion seat, preferably hung from tree, approx. 10' suspension	4			
Two-swing unit, metal standard, 10' high		1		
Tricycle, 20" pedal wheel, 10"k rear wheels, chain drive		1		
Wagon, rubber tires, wooden box, 16" x 34" x 3 ½" deep		1		
Wands	12	12		
Wheelbarrow, rubber-tired		1		
Wooden box, approx. 14" x 24" x 8" high	1			
Yarn balls	24	2	2	
VI PERCEPTUAL DEVELOPMENT				
Beads, wooden, ½ cubes and assorted shapes, box of 1,000	1			
Bead counting frame (See Mathematics.)				
Bead laces	12		6	
Counting rods (See Mathematics.)				
Dressing frames	4			
Games, matching:				
Card: animals, geometric shapes, flowers, vehicles, etc.	4	1	1	
Block: attribute, design, domino, number, property, etc.	4	1	1	
Frame, bingo and lotto type with birds, flowers, food, clothing, zoo animals, etc.	4	1	1	
Flannel board, 18" x 36"	1			
*Flannel board figures, 50 items, set	1			
Geometric solids, wooden, 3" units approx. 6 items, set	1			
Magnetic board, 18" x 36"	1			
Magnetized figures, 50 items, set	1			
Mechanical board: bolts, nuts, locks, etc.	1			

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Kindergarten Group

20–24 CHILDREN — AGES 4–6

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Nest of rings or boxes, 6 to 8 items	1			
Olfactory materials: spices, foods, greenery, etc., in plastic bottles with perforated, tightly sealed lids	X	X	X	
Parquetry blocks, 1" unit, 16-36 in set, some with pattern cards	2	1		
Pegboards, 12" x 12"	4			
Pegs, hardwood, ⅛" diameter, 2" long, box of 1,000	1			
*Puzzles:				
Wooden, 9 to 16 pieces	8	2	2	
Wooden, 17 to 27 pieces	4	2	2	
Shape sorting box with interchangeable panels	1			
Sound cylinders, approx. 3" high, 2" in diameter, set of 5	2			
Tactile materials: sandpaper, cloth, wood, metal, sponge, etc., in container	X	X	X	
*Taste materials: sugar, flour, salt, fruit juices, etc., in plastic containers with removable lids	X	X	X	
Weighing and measuring items (See Mathematics.)				
VII REPRESENTATIVE PLAY AND SOCIAL AWARENESS				
Blocks (See Art and Construction.)				
Block accessories:				
*Figures, 3D animals and people, 3" to 8" tall	5	2	2	
Vehicles and machines: trucks, trains, planes, boats, hoists, 3" to 12" in length	8	2	2	
Vehicles and machines large enough to carry loads of blocks	4		1	
Dolls and doll play:				
Carriage or stroller, 24" to 27" handle, sturdy	1			
Clothes with variety of fasteners	12	4	4	
*Dolls, soft, unbreakable, 10" to 40", multi-ethnic, male and female	4	1	1	
Doll house	1			
*Doll house family, multi-ethnic, sets	2			
Doll house furniture, set	1			
*Dress-up properties, both men's and women's, suggestive of roles or careers, as needed. Choose from Pilot, Astronaut, Bus driver, Cowboy, Doctor, Farmer, Father, Mail-carrier, Fire-fighter, Florist, Miner, Mother, Nurse, etc.	6	4	2+	
*Play accessories:				
Gloves, goggles, hats, jewelry, shoes, ties, etc.	4	2	2+	
Rack and hangers for dress-up clothes, 40" uprights with 36" connecting pole	1			
Prop kits for:				
shoestore, grocery, beauty shop, library, doctor's office, etc.	X	X	X	
Trunk for storing accessories, 30" x 14" x 15"		1		
Office supplies for representative play:				
Dictation pads	2	2	2	
Pencils	2	2	2	
Printing set, stamp type		1		
Tape recorder or old dictaphone		1		
Telephone, old, from telephone company	1			
Typewriter, old		1		
Store and storekeeping supplies for representative play:				
Cash register	1			
Containers, cereal and frozen food boxes, food cans, etc.	12	4	4+	
Plastic food items	4	2	2	
Play money (See Mathematics.)				
Shopping bags	2	2	2	
Shopping cart	1			
Playhouse cleaning equipment:				
Broom, 36" in height	1			
Carpet sweeper that really picks up dirt		1		
Clothes bar, 30" to 36" in height	1			
Dust mop, 36" handle	1			
Dustpan and small counter brush	1			
Laundry set:				
Old-fashioned tub and wash board	1			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Washer and dryer unit, 12" x 16" x 24"		1		
Sponge	1			
Sponge mop, 36" handle	1			
Playhouse furniture and equipment:				
Bed, wooden, approx. 28" x 14" x 10" high	1			
Cupboard, wooden, approx. 22" x 20" x 40" high	1			
Cutlery, aluminium, 4" to 5" long, place setting	4		2	
Dishes:				
Cooking set, 6 to 8 items	1			
Tea set, unbreakable	1		1	
Doll high chair	1			
Iron, wood or metal, non-electric	1			
Ironing board		1		
Refrigerator, wooden, approx. 12" x 24" and 36" high	1			
Rocking chairs, 10"-12" seat height (See Environmental Equipment.)				
Sink, wooden, approx. 12" x 27" x 24" high with plastic pan	1			
Stove, wooden, approx 12" x 16" x 24" high	1			
Table and two chairs, table 18" to 20" high, chairs to slide under	1			
Telephone (See Language Arts.)				
Puppet theater	1			
*Puppets:				
Hand, rubber or cloth, human and animal figures	8	4		
Finger, rubber or cloth, human or animal figures	4		4	
VIII ART AND CONSTRUCTION				
Alcohol, denatured, gal.	1		1	
Ball bearing clips, 2 ½" x 2 ⅜" for easel	8			
Blocks:				
Corrugated	24			
Counting cubes (See Mathematics.)				
Hollow, 4 ½" x 11" x 11", basic unit	24			
Interlocking, large floor		60		
Parquetry (See Perceptual Development.)				
Unit floor, 3" x 3" x 1 ½" basic unit, assorted shapes and sizes	350	200	200	
Brushes, paint				
Flat, ⅛" x 1 ½" spread	6		6	
Round, for easel, 1 ¼" bristles, 9" handle	12		6	
Watercolor	6		6	
Chalk:				
Colored, sticks	12	12	12	
White, dustless, sticks	12	12	12	
Chalkboard (See Basic Environmental Equipment.)				

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Charcoal, box	2		1	
Clay:				
Powder, lbs.	20	20	20	
Semi-moist, lbs.	100	100	100	
Clay containers, polyethylene pails or 5 gals. crocks, with tight-fitting covers	3			
Cloth:				
Burlap and/or heavy weight mesh for stitchery, yds.	2	2	2	
Material, glazed chintz or paper cambric, yds.	2	2	2	
Conductor's punch	1			
Cookie cutters for play dough	6	2	2	
Collage materials: rickrack, ribbon, nylon net, lace, doilies, glitter, yarn, etc.	X	X	X	
Crayon holders	2			
Crayons:				
Hexagonal, 4" length, assorted colors, gross	1	1	1	
Regular, assorted colors, box	1	1	1	
Craft sticks, box	1		1	
Easels:				
Double adjustable height, aluminum		1		
Double, adjustable height, wooden	1			
Erasers, chalkboard	2			
Felt or flannel board (See Perceptual Development.)				
Felt pieces, 9" x 12", pkg. of 12	1		1	
Flour, 5 lb. sack for play dough, paste, cooking	1	1	1	
Food coloring, red, yellow, blue bottles	1	1	1	
Glue, all purpose, tubes	2	2	2	
Marking pens, non-toxic	6	6	6	
Modeling boards, plywood, 12" x 18"		8		
Needles, #20 tapestry, pkg. of 6	2		2	
Paint:				
Enamel, white, qt. with basic enamel tinting set	1			
Finger, cream, qt.	4	4	4	
Finger, powder	8		8	
House, flat, qt.	1		1	
Poster, powder, lb.	6	6	6	
Poster, thick, liquid, qt.	12		12	
Water colors, sets	3	3	3	
Paint jars, plastic with covers	16			
Paper:				
Brown, wrapping 45 lb. roll with dispenser	1			
Construction, colored, 9" x 12" pkg. of 50 sheets	20	20	20	
Construction, colored, 12" x 18" pkg. of 50 sheets	8	8	8	
Crepe, 20" x 7 ½", pkgs.	2	2	2	
Frieze, one side glazed, other side rough, 24" x 180', roll	1			
Manila for drawing, 12" x 18" reams	8	8	8	

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Kindergarten Group

20–24 CHILDREN — AGES 4–6

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Poster, colored, 9" x 12", pkg. of 100 sheets	20		20	
Poster, colored, 12" x 18", pkg. of 100 sheets	4	4	4	
Tagboard, medium weight, 24" x 36" sheets	10		10	
Tissue, 20" x 30", pkg. of 24 sheets	4	4	4	
News, unprinted, 18" x 24", pkg. of 100 sheets	15	15	15	
Paper bags, approx. 8" x 14"	24	24	24	
Paper brads or fasteners, boxes	2		2	
Paper clips, box of 100	4	4	4	
Paper cutter, 12" blade	1			
Paste, semi-liquid, gal.	2	2	2	
Paste jars, 2" diameter, 1 ½" deep, with covers	10			
Pastesticks, hardwood, pkg. of 500	1		1	
Pencils, soft, thick lead, without erasers	12	12	12	
Pencil sharpener	1			
Pins:				
Safety, medium size, box of 100	1		1	
Straight, common, roll of 300	2	2	2	
Pipe cleaners, assorted colors, pkgs.	2		2	
Plasticine, single color, lbs.	5	5	5	
Play dough, can be made or purchased, as needed	X	X	X	
Rolling pins for play dough	4			
Roving, heavy rug filler, hanks	3			
Rubber binders, assorted sizes, box of 100	1	1	1	
Rulers (See Mathematics.)				
Salt for play dough and cooking, box	2	2	2	
Sand:				
Indoor sandbox, white, fine, lbs. or cornmeal or sawdust in comparable amounts	200			
Outdoor sandbox, coarse, lbs.	800			
Sand toys: spoons, measures, molds, etc.	12		4 +	
Sandpaper, grades 000 to 3, pkg. of 10 sheets	1			
Scissors:				
Adult size, pair	2			
Children's forged steel, majority semi-pointed, 2 or 3 pointed, 1 or 2 left-handed and 1 plastic	24		6	
Double handled training, children's	2			
Shellac, clear, qt.	1		1	
Staple remover	1			
Stapler	1			
Staples, box	2	2	2	
Starch for mixing finger paint, boxes	2	2	2	
String, carpet warp, colored, ½ lb. spool	1			
Tapes, adhesive:				
Masking, ½" wide x 60 yds. rolls	4	4	4	
Mending, Scotch permanent, transparent, ½" wide x 60 yds., rolls	2		2	
Mystic, cloth with plastic finish, 3" wide x 108", roll	1		1	
Thread, black and white, #60, spools	2			
Thumbtacks, solid heads, ⅜" length, box of 100	3		3	
Toothpicks, for painting, collage, and construction, boxes	3	3	3	
Tools for Woodworking:				
Bits, ¼", ½", and ¾"	1	2		
Brace, adult size, 1 ½ lbs.	1	1		
Coping saw, wooden handle	1		1	
Coping saw blades	3		3	
Hammers, 13 oz., 16 oz., flat head with claws	2			
Hand drill and drill sets	1			
Nails, 3d, 6d, 7d, lbs.	5	5	5	
Pliers, with wire cutter	1			
Saws, crosscut, 14" blade, 18" blade, 8 teeth per inch	2			
Screwdrivers, 8", 12", regular and Phillips	2			
Screws, steel, flat head, assorted sizes, box of 50	1			
Try square, 8" blade		1		
Turpentine, plain, qt.	1	1	1	
Wheat paste, lbs.	1	1	1	
Wood:				
Mill ends, flat, any soft wood, cu. ft.	6	6	6	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Lumber footage, ¼" x 3', from 2" to 8" wide, pieces	30	30	30	
Discs, ¼" thick, 5" to 6" diameter, units	8	8	8	
Dowels, 3' lengths, ½" and ¼" diameter, units	8	8	8	
Yarn, red, green, yellow for stitchery, wrapping and collages, balls and scrounged	4	4	4	
Water color markers, nontoxic, water soluable	3	3	3	
IX MUSIC				
Books: musical games, rhythms, songs	6	2	2	
Instruments:				
Autoharp, 12 bar		1		
Bells, sets	1			
Chinese tom-tom			1	
Cymbals		2		
Drums:				
Barrel	1			
Hand snare			1	
Jingle clogs	4			
Maracas			4	
Piano, midget, upright or spinet	1			
Recordings: music appreciation, musical games, rhythms, songs and stories	8	4	4	
Record player, portable	1			
Needles:	1			
Long-life, 1,000 to 10,000 play per needle	1			
Sapphire-tipped, lifetime			1	
Rhythm sticks	12			
Step bells	1			
Tambourine	1			
Tape recorder (See Language Arts.)				
Tape reels or cassettes for recording and listening (See Language Arts.)				
Tone blocks	2			
Triangle	1			
Xylophone, wooden	1			
X LANGUAGE ARTS				
*Books:				
Picture-story, in classroom, and access to library	30	10	10	
Reference, in classroom, and access to library	5	3	2	
Chart paper tablets, large, for experiences	2	2	2	
*Films, 16 mm, and 8 mm, access to Film screen, approx. 3' x 4'	1			
*Filmstrips	6	2	2	
Flannel board with letters, shapes and storytelling figures	1			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Games: completion, hidden parts, and story sequence, picture and lotto types	4	2	2	
Frames, sorting by initial or rhyming sounds	2	1	1	
Letters of the alphabet, one upper, one lower case, wood, foam rubber, or plastic with magnetic insets, set	2			
Listening post		1		
Paper, primary lined, for writing, sheets	50		50	
Projectors:				
8 mm, and 16 mm, movie (access to) Filmstrip and slide (access to)				
Junior or access to			1	
*Puppets (See Representative Play and Social Awareness)				
Puppet theater (See Representative Play and Social Awareness)				
*Recordings, stories and songs	10	4	2	
Representative play media (See Representative Play and Social Awareness.)				
*Pictures:				
Framed, without glass or with non-reflecting glass	2	1	1	
Poster	2	2	2	
Well mounted, current	30	10	10	
Sentence strips, pkg.	1	1	1	
*Slides and frames (access to) Tape recorder	1			
*Tape reels or cassettes for listening	4	1	1	
Tape reels or cassettes for recording	4	2	2	
Telephones:				
Wooden, with dial or push button mechanism	2			
Intercom unit with wires and batteries			1	
View Master	1	1		
*View Master frames or reels	6	4	2	
XI MATHEMATICS				
Bead counting frame, approx. 18" x 24"	1			
Beads (See Perceptual Development.)				
Calendar (See Basic Environmental Equipment.)				
Clocks:				
Alarm, electric		1		
Alarm, hand wound	1			
Plywood with gear operated hands	1			
Plywood with manually operated hands	2			
Wall (See Basic Environmental Equipment.)				

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

A Kindergarten Group

20–24 CHILDREN — AGES 4–6

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Counting cubes, 1" x 1" x 1"	36			
Counting rods, 10 units in a set, basic unit, 1" x 1" x 3"	2			
Cuisenaire Rod set	1		1	
Games: Bead and number cards, card matching, numeral to numbers, dominoes, lotto matching sets, number bars, number tray, scoring games such as adhesive ball darts, shake the dice and play, spin the dial and play and walk-on number line	6	2	2	
Geometric figures (See Perceptual Development)				
Logic or attribute blocks, set	1			
Measures:				
Linear:				
Meter stick, 90 centimeters, approx. 1 yard	1			
Ruler, 30 centimeters, approx. 12"	1			
Ruler, 12" with ½ and 1" markings	1		1	
Tape measure, centimeter and inch markings	1		1	
Yard stick	1			
Liquid and Dry: tsp., ¼, ½; tbls; cup, pt., qt., gal.	8			
Weights (See Scales below.)				
Minute Minders:				
Clock type		1		
Hourglass type	1			
Stopwatch			1	
Numerals, felt, wood, or plastic with magnetized insets, sets	2	1		
Pegboards (See Perceptual Development.)				
Play money, commercial or child-made, pkg.	1			
Scales:				
English, sliding attachment for accurate values		1		
Mathematical balance	1			
Pan balance	1			
Platform, with height measure attached (access to)				
Spring, hanging			1	
Unifix cubes, set	1			

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Weights for scales, various amounts, set	1			
XII SCIENCE				
Ant farm, approx. 8" x 12" x 2"			1	
Aquarium, 10" x 18" x 14" high	1			
Beehive, window, model, approx. 18" x 12" x 4"			1	
Cages:				
Animal, 10" x 18" x 14" high, all metal with exercise wheel and water bottle	1			
Animal, 36" x 36" x 36", wooden frame, removable metal tray		1		
Cocoons, butterfly moth	3	3	3	
Cooking equipment: aprons, bowls, bread, pie and cake pans, cookbook, cookie sheet, cutlery, pitchers, sauce pans and cooking ingredients, as needed (See also Snacks and Special Occasions.)	X	X	X	
Electrical kit, batteries, bells, switches, wires, bulbs		1		
Food for:				
Chickens, gerbils, hamsters, mice etc., lbs.	5	5	5	
Fish, bird, etc. as needed	X	X	X	
Garden tools, junior size but sturdy, steel, 36" handles, set	1			
Globe, simple, 9" diameter or larger	1			
Grow chart, height, weight	1			
Hose, ½ diameter, 36" long, for siphon		1		
Hot plate and oven (See Snacks and Special Occasions.)				
Incubator	1			
Jars, clean, plastic or glass, with covers, 6 oz. to 1 qt.	6	2+	2+	
Kaleidoscope	1			
Level			1	
Magnets:				
Bar	1			
Horseshoe	1			
Ring, plastic coated, 1" in diameter	6		6	
Spot, ¼" x ¼" x ¼", set in plastic	12		6	

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Magnifying glass 3" to 4" in diameter with handle	1	1		
Measuring units (See Mathematics.)				
Outdoor garden	1			
Pets:				
Baby chicks		6-12		
Canary		1		
Ducks		2		
Hamsters			2+	
Hen, setting				1
Geese			2	
Gerbils	2+			
Goldfish	5			
Parakeet			1	
Rabbits	2+		2+	
White mice or white rats		2+	+	
Plants	4	2	2	
Plastic bags, 3" x 5" to 12" x 15"	24	24	24	
Prism	1			
Scales, English (See Mathematics.)		1		
Syringe, large bulb for watering plants		1		
Terrarium, 10" x 18" x 14" high		1		
Thermometers, indoor-outdoor, large figures, red indicator and a hand operated model	2			
Watering cans, 1 qt., long spout, heavy flat base	1			
Water table—sandbox, plastic dishpan, or baby's bathtub can be used	1			

XIII SNACKS AND SPECIAL OCCASIONS

A petty cash fund of a stipulated amount ($15.00 to $50.00) or a write-in bill form should be available for the purchase of special occasion, emergency and "best buy" items.

SUGGESTED ITEMS	QUANTITIES			
	A	B	C	D
Birthday ring or cake, wooden or plastic	1			
Cooking equipment (See Science.)				
Cutlery:				
Forks, small, sturdy plastic	48		36	
Knives, two for cutting, four for spreading	6			
Spoons:				
Mixing	2			
Serving	2			
Tablespoons	2			
Teaspoons, small sturdy plastic	48		36	
Electric hot plate and oven or access to	1			
Flag, national, approx. 2' x 3'	1			
Paper service:				
Cups, 5 oz., pkg. of 100	20	20	20	
Napkins, plain, cocktail size, pkg. of 250	5	5	5	
Plates, 6" in diameter, pkg. of 100	3	3	3	
Straws, drinking, pkg. of 500	2	2	2	

XIV RECORD KEEPING

Anecdotal note cards to fit desk-top file drawers	200	200	200	
Attendance sheets	200			
Desk-top file, four drawer, wooden	1			
File, free standing, metal, 3 or 4 drawers	1			
Forms for parent-teacher conference	200			
Health and general information cards	200			
Microcomputer, for record keeping			1	

James D. Quisenberry and Shirley Hindman
Committee Chairperson, Dormalee Lindberg

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Early Elementary School Groups

AGES 6–10

INTRODUCTION
I BASIC ENVIRONMENTAL EQUIPMENT
II BASIC EXPENDABLE MATERIALS
III HOUSEKEEPING EQUIPMENT AND SUPPLIES
IV HEALTH AND FIRST AID
V PSYCHO-MOTOR EQUIPMENT
VI AUDIOVISUAL MATERIALS
VII ARTS AND CRAFTS
VIII LANGUAGE ARTS
IX MATHEMATICS
X MUSIC
XI SCIENCE
XII SOCIAL STUDIES—SOCIAL AWARENESS
XIII RECYCLABLE MATERIALS

Although each grows and develops in a unique way, children do have certain characteristics in common. An understanding of these shared characteristics is necessary in selecting appropriate materials and equipment for the elementary school classroom.

As at every age level, the genuine involvement of 6- to 10-year-old children in situations that concern them is crucial. Along with such involvement comes the desire to be accepted by those around them, both adults and peers. Children's involvement with their environment and their interaction with others frequently take place in play. Play is serious business for children, since through it they learn about their world, how to function in it and how to come to terms with it.

Children in this age group need frequent, sustained opportunities to move about. Much movement is required to develop fine and gross muscle control, strength and endurance. Their movement needs include vigorous, sometimes boisterous, individual and group play involving running and jumping, climbing and balancing, tumbling and stunting, throwing, catching and kicking. Dramatizing and rhythmic activities—as well as other fine motor activities such as sewing, lacing and threading—are both fun and necessary for balanced development.

Socializing skills are enhanced by play and practice in teams and other organized activities. Group loyalty increases steadily from 6 to 10, with the individual increasingly influenced by what peers in the group eat, do, say, wear, play and even think. The 6- to 10-year-old is also likely to have heroes who are often television characters or stars from the music industry. Actors and actresses from both the movies and television are much admired. Interest in the group expands during this time to include other people, places and events. There is increased interest in pleasing others, especially adults, and in seeing that rules are followed (especially by others!). Fair play becomes very important. Encouragement from significant adults is crucial at this time.

As with their physical and social skills, children's interests at this age expand rapidly to include practically any and all topics they encounter. Imaginative play remains important, though discernment of the differences between fact and fantasy is becoming more sophisticated and complex. While moving away from the concrete to abstract thinking, 6- to 10-year-olds continue to need concrete experiences, manipulatives, etc., to assist in concept formation. Since they learn particularly well through their senses, they should be provided regularly with multisensory experiences. They work willingly, tackle anything and welcome challenges with gusto. By the later stages of this age span, children have progressed well along the way to mastery of the basic skills, concept formation and problem-solving abilities that will serve them throughout their adult lives.

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Early Elementary School Groups

AGES 6–10

IMPORTANT: Currently the most prevalent elementary school organizational pattern for 6- to 10-year-olds is the self-contained classroom with one teacher and 20 to 30 children, although one can find team teaching of larger groups, departmentalization and various other organizational schemes being utilized. Using this checklist as a planning resource, creative teachers can make additions, adjustments and deletions to plan for their unique situations, thus meeting the needs of the individual students in their particular classroom settings.

Note: Items and quantities suggested on the following pages of this section are to be thought of as guides rather than inventories.

SUGGESTED ITEMS AND QUANTITIES*

CLASSROOM
20-30 CHILDREN

I BASIC ENVIRONMENTAL EQUIPMENT

____	1	Air conditioner (where appropriate)
____	2	Bookcases or shelves to meet needs
____	4	Bookends, pairs
____	1	Bulletin board, attached to wall
____	1	Bulletin board, chalk on one side, bulletin board on the other
____	2	Cabinets, storage, 73" x 36" x 15"
____	1	Carpeting
		Chairs, adult size:
____	1	Rocker
____	2	Straight
		Chairs, child size:
____	1	Beanbag
____	3–5	Floor pillows
____	2	Rocker
____	30	Straight
		Chalkboards:
____	1	Movable
____	1	Stationary
____	2	Chart holders
____	1	Clock, wall
____	X	Drapes to darken room
		Flags:
____	1	State
____	1	United Nations
____	1	United States
____	1	Manual typewriter
____	1	Mirror, full length
____	1	Sink
____	1	Soap dispenser, liquid
____	2	Storage bins, for blocks and other supplies

*Estimates on expendable items are based on a single school year's consumption.

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

____	10–14	Tables, adjustable, to vary according to need: trapezoid, round, oblong
____	1	Towel dispenser
____	2	Wastebaskets
____	X	Window stick, where needed

II BASIC EXPENDABLE MATERIALS

____	2	Brads
____	1	Carbon paper, box
____	2	Chalk, yellow, dustless boxes
____	12	Chalkboard erasers
____	3	Chart tablets, large, ruled for experience charts
____	2	Colored folders, 100 per pkg., assorted colors
____	2	Eyelet punches
____	2	Eyelets, boxes
____	4	Fasteners, paper, 1", ¼", box of 100
____	2	Gummed labels, boxes
____	6	Kraft rolls in assorted colors
____	2–6	Lettering pens
____	2	Markers, felt tip, set of 8 assorted colors
		Paper:
____	6	Duplicating, reams
____	1	Master copy for duplicators, box
____	8	Story, 12" x 18"—plain space at top for illustrations and ruled lower half for story, reams
____	2	Typing, reams
		Writing:
____	2	8" x 10½" with ½" rulings, reams
____	2	8" x 10½" with ⅜" rulings, reams
____	2	9" x 12" with 1" rulings, reams

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Early Elementary School Groups

AGES 6–10

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

____	2	9" x 12" without rulings, reams
____	3	9" x 12" imaginary line paper
____	4	Paper clips, box of 100
____	2	Pencil erasers, soft rubber, doz.
		Pencils:
____	3	Beginners, #308, Dixon, for first year, doz.
____	3	Laddie, #304, Dixon, for second year, doz.
____	4	No. 2, for third year, 1 doz.
____	2	Reinforcements, box of 200
____	2	Rubber bands, 4 oz., box of assorted sizes
____	1	String ball
____	4	Suspension rings, 1", 1½", 2", box of 100
		Tagboard:
____	3	Manila, 12" x 18", pkg of 100 sheets
____	1	White, 12" x 18", pkg. of 100 sheets
____		Tapes, adhesive:
____	2	Masking, rolls
____	1	Mending, box
____	4	Scotch, magic, transparent, ½" x 700" with dispenser, rolls
____	3	Thumbtacks, boxes
____	1	Transparencies, box of 100
		Transparency pens:
____	2	Washable
____	1	Permanent

III HOUSEKEEPING EQUIPMENT AND SUPPLIES

		Brooms:
____	1	Corn, light weight, straight, adult size
____	1	Push, long handle
		Brushes:
____	1	Counter style
____	4	Hand scrub
____	2	Buckets, flat bottom
____	4	Cleanser, cans
____	1	Dishpan, plastic
____	1	Dustpan
____	X	Lunch supplies, where necessary
____	1	Mop, sponge
		Pins:
____	1	Safety, box of 100
____	1	Straight, roll of 300
____	1	Sink strainer
		Soap:
____	2	Flake or granule, box
____	1	Liquid, gal.
____	3	Sponges
____	5	Towels, paper, case of 3,000
____	1	Vacuum cleaner
____		Wastebasket (See Basic Environmental Equipment.)

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

IV HEALTH AND FIRST AID

Items available in Nurse's Office or Central Supply Area
or

____	1	First aid cabinet stocked in accordance with individual school regulations
		or
____	2	Band-Aids, boxes
____	1	Gauze, sterile, roll
____	10–12	Handkerchiefs, paper, boxes
____	1	Merthiolate, Tincture of, or bottle of comparable disinfectant
____	2	Soap, medicated, bars
____	1	Tweezers
____	2	Blankets
____	1	Cot
____	1	Instant-ice pack

V PSYCHO-MOTOR EQUIPMENT

		Balls:
		Indoor/outdoor, roll and kick, inflated:
____	3	13" diameter, for younger children
____	3	10" diameter, for older children
		Push and toss beach balls, latex:
____	3	18" diameter
____	3	24" diameter
		Toss and catch, rubber:
____	3	7" diameter
____	3	8" diameter
____	3	Throw, bat and catch, cork center, scuff proof cover
____	2	Bats, small size, for children 8–10 years
____	6–10	Bean bags
____	1–2	Climbing apparatus, indoor/outdoor, for movement exploration
____	8–10	Hoops
____	1	Horizontal bars, set
____	1	Horizontal ladder
		Jump ropes:
____	4–6	Rope for a single child
____	1–2	Rope for groups of children
____	1	Records, assorted set of movement records
____	2–4	Ring toss sets
____	2	See-saws
____	1	Slide
____	3	Swings
____	4–8	Tires, old automobile, bicycle, airplane
____	1	Traveling rings, set
____		Tumbling mats, 4' x 6' (access to)

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

____	1	Turning bar
____	1	Walking beam or board with cleats on ends

VI AUDIOVISUAL MATERIALS

____	2	Alphabets, manuscript and cursive letters
		Art items for children to enjoy:
____	2–4	Carvings
____	4–6	Ceramics
____	3–5	Mobiles
____	40–60	Books, good quality and access to library
		Cameras:
____	2	Instamatic cheap cameras for children to use, plus film
____	1	Instant developing camera, plus film
____		Access to 8 mm camera and projector, plus film
____	1	Cassette recorder
		Cassettes:
____	3–6	For listening and access to others
____	2	For recording
____	X	Charts
____		Films (access to)
____		Filmstrips (access to)
____	2	Filmstrip viewers
		Globes:
____	1	Large
____	1	Project
____	1	Relief
____	1	Simplified
____		Listening station equipment (See Music.)
____	2	Language Master w/cards
		Maps:
____	1	State and community
____	1	U.S.A., simplified
____	1	World, simplified
____	2	Microcomputers w/software
____	18–36	Pictures, mounted
____	3–8	Prints, reproduction of fine paintings
____		Projectors: opaque, overhead, micro, slide/filmstrip (access to)
____		Radio (access to)
____	1	Record player
____	8–12	Records and access to others
____	1	Screen
____		Slides (access to)
____	1	Tape recorder
		Tapes:
____	4–8	For listening
____	2	For recording
____		Television (access to)
____	X	Textiles, assortment
____	2	View Masters
____	5–10	View Master reels

VII ARTS AND CRAFTS

____	2	Aluminum foil
____	10	Aquarium gravel, lbs.
____		Blocks, counting, table assorted shapes and sizes (See Mathematics.)

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

		Brushes:
____	12	⅛" bristles, 12" and shorter handles
____	12	1" bristles, 12" and shorter handles
____	1	Carpet warp, ½ to 1 lb. spool
____	1	Chalk, non-oil base, assorted colors, box of 144
____	25	Clay, mixed, 1 lb. pkg.
		Cloth:
____	2	Burlap, yds
____	1	Felt, pieces for applique work, pkg.
____	3	Meshed, for stitchery, yds.
____	2	Muslin, unbleached, yds.
____	6	Contact, self-adhesive plastic, yds.
____	12–18	Containers, ½ pt, or pt., plastic, with covers, for paint
____	2	Coping saws
		Crayons:
____	15	Big, mixed colors for Grade 1, box of 8
____	15	Regular, mixed colors for Grades 2 and 3, box of 8
____	2	Design cubes, set
____	2	Detergent powder, box
____	1	Dry mount press
		Easels:
____	3	Standing
____	6	Table
____	1	Erector set
____	1	Floor blocks, large building set (See also Mathematics.)
____	1	Garbage can, plastic, with cover and liner, for clay
		Glue:
____	1	Elmer's, white, gal.
____	1	Rubber cement, qt.
____	1	Thinner, pt.
____	1	Semi-liquid paste, gal.
____	1	Laminator, 12", automatic, w/film
____	2	Laundry starch, liquid, for making finger paint or paper-maché, gals.
____	1	Lego Erector set
____	1	Lincoln Logs
____	5	Looper looms
____	7	Loops, large, in assorted colors, pkgs.
____	4	Muffin tins for use as paint containers, 6 places per tin to hold covered paint cups
		Needles:
____	2	For crewel and embroidery, pkgs.
____	4	Large eye, pointed, 3" and 5", for weaving, pkgs.
____	2	Oilcloth for weaving, yds.
		Paint:
____	6	Enamel, pt. size, in red, orange, yellow, green, blue, brown, white
____	6	Finger, 1 qt jars, assorted colors
____	3	House, flat, colors as needed, poster paint and shellac can be substituted, qts.
____	8	Poster, 1 qt. jars, assorted colors
____	12–16	Powder, in *red, yellow,* green, *blue, black, white,* brown, (greater quantities of the it-alicized colors), 1 lb. boxes
____	1	Remover, qt.

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Early Elementary School Groups

AGES 6–10

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

		Paper:
___	5	Construction, 12" x 18", pkg. of 100 sheets, assorted colors
___	3	Corrugated, 4' x 25', roll, assorted colors
___	2	Crepe, flame resistant, 20" x 7½", pkg.
___	4	Finger paint, 16" x 22", pkg. of 100 sheets
___	6	Manila, 9" x 12", ream
___	3	Manila, 12" x 18", ream
___	1	Mural, 36" wide, roll
___	5	Newsprint, 9" x 12", white and assorted colors, pkg. of 100 sheets
___	4	Newsprint, 18" x 24", pkg. of 100 sheets
___	3	Poster, 9" x 12", pkg. of 100 sheets
___	2	Poster, 12" x 18", assorted colors, pkg. of 100 sheets
___	6	Project paper, rolls, red, orange, yellow, green, blue, white, brown, black
		Tissue Paper:
___	1	Art kraft, pkg.
___	2	White tracing, pkg.
___	60	Paper bags, assorted sizes
		Paper cutters:
___		25" (access to)
___	1	12"
___	100	Paper plates, assorted sizes
___	10	Paper tissues, box of 200
___		Pegboard and pegs (See Mathematics.)
___		Pencils (See Basic Expendable Materials.)
___	1	Pencil sharpener
___	1	Project paper holder, 8 roll type
___	X	Scented assorted color markers (1 set per child)
		Scissors:
___	4	Left-handed, some blunt, some sharp points
___	20	Right-handed, some blunt, some sharp points
___	10	Sand, lbs.
___	1	Shears
___	5	Soda straws, boxes
___	1	Spirit duplicator
___	4	Waxed paper
		Staplers:
___		Long arm or reach, 12" or more (access to)
___	1	Standard
___	1	Small
___	2	Staples, assorted sizes, boxes
		Tinkertoys:
___	1	Giant size set, if space available
___	1	Regular set

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

___	X	Wall covering, plastic, odds and ends and sample books
___	8–10	Wheat powder, for making finger paint and paper-mâché, lbs.
		Woodworking:
___	1	Alcohol, qt.
___	1	Brace, non-ratchet, and bits, ¼", ½", ¾", 1" set
___	X	Carpenter's workbench with vise or 2–3 sturdy wooden tables or low, broad topped saw horses with vises
___	2	C-clamps, 4" - 6"
___	2	Claw hammers, 13 to 16 oz.
___	8	Dowel rods, ¼", ½", ¾", 1"
___	1	File, wood, half round
___	1	Hand drill, ⅛" capacity and bits, set, or file point of nail for smaller size
___	1	Linseed oil, qt.
		Lumber:
___	X	Mill-ends
___	12–24	Pine, white, surfaced on 4 sides, 1" x 4", ½" x 3", ¼" x 1", for axles on vehicles and 1" x 4" in 4' to 6' lengths for bases on boats, cabins, etc., pieces
___	1	Nail nipper or 6" pliers
___	5	Nails: finishing, blue lath, fine shank, smooth wire, roofing—with large heads, in 1", 1½" and 2" sizes, lbs.
___	1	Rasp, medium
___	3	Rulers, inch and centimeter markings, 12" long
___	1	Sandpaper, fine, medium, coarse, quire
___	2	Saws, crosscut, 18" blade
___	2	Screws, assorted sizes, boxes
___	1	Screw eyes, box
___	2	Screwdrivers, Phillips and straight
___	1	Shellac, white, qts.
___	1	Smoothing plane
___		Tongue depressors and popcicle sticks (assortment)
___	2	Try squares
___	2	Turpentine, qts.
___	1	Wrench, monkey, 12"
		Wood or wood substitutes:
___	6–12	Balsa, small pieces for planes and other models
___	2	Beaver board, 4' x 4', sheets
___	2	Tri-wall, sheets, 4' x 4'
___	12–20	Wooden discs, 3" to 5" in diameter, or button molds, 1", 1½" and 2½", for wheels

____	1	Yard and meter stick combination
____	6–8	Yarn balls and odds and ends, assorted colors

VIII LANGUAGE ARTS

____	2	Alphabet wall cards, set
____	50–60	Books, children's:
____	X	Good books to read to children
____	X	Easy to read books
____	X	Text books
____	X	Trade books
____	2	Bookends, pairs
____	2	Book holders or racks for small books
____	6–8	Companion sets: books with complete script on records or cassettes for read-along activities
____	8–12	Games: Anagrams, Dominoes, Link Letters, Lotto, Old Maid, Parchesi, Phonic Rummy, Picture, Scrabble, Vowel Lotto
		Letters:
____	2	Manipulative letters, various types, sets
____	1	Tactile letters, set
____	10–15	Puzzles, sequence, game and picture
____	X	Reading charts
____		Record player (See Audiovisual Materials.)
____	6–12	Recordings of stories and poems
____	3–5	Records for teaching listening skills, following directions, etc.
		Representative Play Materials:
____	X	Costumes for creative dramatics and storage chest
		Dolls:
____	4	Ethnic variety, male and female, 12" to 16", 2 sets of clothes for each doll
____		Handicapped
____	2	Community workers, sets
____	1	Doll carriage
____	2	Family, sets
____	10–20	Models: animals, boats, buses, cars, planes, trucks, etc.
____	5–10	Puppets: hand, finger and materials for constructing same
____	2	Telephones, toy
____		Tape recorder (See Audiovisual Materials.)
		Typewriters:
____	1	Old, for children's use
____		Primary (access to)
____	4–6	Wall strips
____	10–24	Wall cards

IX MATHEMATICS

____	2	Abacus
		Blocks:
____	6	Attribute blocks
____	2	Counting, table sets
____	1	Cuisenaire rods, classroom set
____	1	Dominoes, large set
____	1	Floor, large building, set
____	1	Geo, set
____	2	Number bars or rods, sets

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

____	1	Proportional numbers, set
____	5	Calculators
____	1	Cash register, toy
		Clocks:
____	1	Large, wooden face, gear operated hands
____	6–10	Small, wooden face, manually operated hands
____		Wall, electric (See Basic Environmental Equipment.)
____	5	Counting sticks
____	1	Flannel board
____	2	Flannel board kits
____	X	Flash cards, different types
		Games:
____	6–12	Bingo, Dominoes, Link Numbers, Magic Targets, Math Balance and Scale, Number Floor Line with Bean Bags, Skittles and other number games
____	1	Magnetic board
____	X	Math charts
		Measures:
		Linear:
____	1	Giant ruler
____	2	12" rulers with ¼", ½", and 1" markings
____	1	Meter stick, large 90 centimeters
____	1	Meter stick, small, 30 centimeters
____	1	Tape measure with inches and centimeter marking
____	1	Yardstick
____	1	Liquid and dry: cup, pt., qt., gal, plastic set
____	2	Scales, English and metric, 1 each
		Thermometers, Fahrenheit and centigrade:
____	1	Indoor and outdoor
____	1	Large cardboard model for teaching
____	X	Rubber stamps
____	X	Clock faces
____	X	Money
____	1	Toy money, varying denominations, set

X MUSIC

____	1	Autoharp, 12 bar
		Bell sets:
____	1	Chime
____	1	Melody
____	1	Resonator
____	1	Song
____	1	Step
____	1	Tone tuned
____	3	Bells, single
____		Cassettes (See Audiovisual Materials).
____		Cassette recorder (See Audiovisual Materials.)
____	2	Castanets, hand, pairs
____	2	Clappers
		Cymbals:
____	1	7", brass, pair
____	2	Finger, pairs
____	2	Drums
		Listening station equipment:
____	6–8	Earphones and jacks
____	1	Manipulative scale blocks, set of 8

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Early Elementary School Groups

AGES 6–10

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20–30 CHILDREN

___	2	Maracas, pairs
___	1	Marimba or xylophone
		Music books:
___	2–4	Rhythm
___	3–6	Song
___		Piano (access to)
___		Radio (access to) (See Audiovisual Materials.)
___		Record Player (See Audiovisual Materials.)
		Records:
___	2–4	Exercise
___	2–4	Folk dance
___	3–6	Rhythm
___	4–8	Singing
___	6	Rhythm sticks, pairs
___	3	Sand blocks, pairs
___	1	Tambourine
___		Tape recorder (See Audiovisual Materials.)
___		Tapes (See Audiovisual Materials.)
		Teaching aids:
___	1	Chromatic pitch pipe
___	X	Music charts
___		Television (See Audiovisual Materials.)
___	1	Tom-tom, Chinese or Indian
___	2	Tone blocks
___	1	Triangle

XI SCIENCE

___	1	Ant farm
___	1	Aquarium with glass cover
___	10–18	Balloons
___	1	Barometer
___	1	Bicycle pump
___	8–12	Bulbs, garden
___	2	Cages with removable bottoms, for birds, hamsters, gerbils, rabbits
___	1	Compass, magnetic
___	X	Containers, clear plastic with cork or screw-on plastic cover
		Cooking equipment:
		Baking pans:
___	1	9 x 13 cake pan
___	1	8 x 8 cake pan
___	1	Bread pan
___	1	Cookie sheet
___	1	Cupcakes pan
___	1	Pie pan
___	2	Round layer cake pans (8")

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20–30 CHILDREN

		Bowls:
___	2	Glass mixing bowl (for watching, serving, two sizes)
___	3	Plastic mixing bowl (three sizes, with lids)
___	1	Electric skillet
___	1	Hot plate
___	1	Ladle
___		Measures:
___	X	Cups
___	X	Spoons
___	X	Paper or plastic plates, cups, and eating utensils
		Sauce pans with lids:
___	1	3 qt.
___	1	4 qt.
___	1	Small oven
___	1	Spatula
___	X	Spoons for mixing
___	1	Electric bell with wire, dry cells, set of 2
___	6–8	Flower containers: boxes, pots and vases in various sizes
___	X	Food for pets
		Garden equipment:
___	3	Hoes
___	3	Rakes
___	2	Shovels
___	1	Spade
___	1	Sprinkler
___	2	Trowels
___	2	Watering cans
___	1	Hose, 20'
___		Hot plate or stove (access to)
___		Incubator (access to)
___	1–3	Insect cages
___	1	Iron filings, 20 mesh, pkg.
		Magnets:
___	2	Horseshoe
___	2	Bar
___		Magnifying glasses:
___	1	Large, on stand
___	1	Small with handle
___		Measuring stick, English and metric (See Mathematics.)
___		Microscope (access to)
___	1	Preserving fluid, for specimens, qt.
___	2	Prisms
___		Refrigerator (access to)
___		Scales (See Mathematics.)
___	X	Seeds from flowers, fruits and vegetables

____	1	Terrarium with glass cover
____	3–5	Test tubes and beakers
____	2	Thermometer, indoor/outdoor (See Mathematics.)
____	2	Timers, egg and clock types, 1 each
____	1	Tuning fork
____	1	Weather vane

XII SOCIAL STUDIES—SOCIAL AWARENESS

____	8–12	Activity cards, teacher made
____		Blocks, table and floor sets (See Mathematics.)
		Block accessories:
____	6–18	Human and animal figures, 3" to 8" tall
____	6–12	Vehicles and machines, 3" to 16" length
____	1	Camera, film and flash bulbs
____		Cassettes (See Audiovisual Materials.)
____	1	Community resource file, people and places
____	X	Films and filmstrips, featuring:
		Careers Government
		Ecology Industries
		Families Production and consumption
____	1	Globe (See also Audiovisual Materials.)
____	X	Magazines: *National Geographic* and other illustrated periodicals depicting likenesses and differences in cultures
		Maps: (See also Audiovisual Materials.)
____	1	Community
____	1	State
____	1	Nation
____	1	World
____	1	News bulletin board
		News:
____	X	Newspapers, adult
____	X	Newspapers, children's
____	X	Radio
____	X	Television
____		Puppets (See Language Arts.)
____	X	Role-playing properties
____	1	Sand table
____	4–6	Simulation games
____		Tapes and cassettes (See Films and Filmstrips, above.)
____	X	Transportation facilities for field trips

SUGGESTED ITEMS AND QUANTITIES

CLASSROOM
20-30 CHILDREN

XIII RECYCLABLE MATERIALS

SUPPLY ACCUMULATED

The following list of recyclable or throw-away materials will be useful: for making creative teaching aids and games, for use in arts and crafts projects, for storage of other materials and for a variety of other classroom and home uses. All items must be clean, free from rough, sharp edges.

- ____ Buttons
- ____ Candy boxes with partitions and trays
- ____ Cardboard items: boxes, cartons, corrugated and other sheets, tubing from paper rolls, etc.
- ____ Catalogs
- ____ Cellophane grass used in packaging
- ____ Coffee cans
- ____ Egg cartons
- ____ Facial tissue boxes
- ____ Fruit boxes with partitions and trays
- ____ Gift wrapping paper, odds and ends
- ____ Hosiery boxes, novelty
- ____ Magazines for pictures, colored paper, letters and words
- ____ Margarine and cottage cheese containers with lids
- ____ Metal boxes, containers for candy, cookies, fruitcake, etc.

Newspapers:

- ____ Supplements for colored pictures
- ____ Ad sections for painting on, paper-mâché and stuffing
- ____ Plastic items: bottles, boxes, cups, meat and fruit trays, lids and tops, etc.
- ____ Ribbon bits and lengths
- ____ Scraps of carpeting, contact paper, cloth, felt, sandpaper, yarn, etc.
- ____ Spools, large and small
- ____ Styrofoam packing
- ____ Tennis ball or similar cans
- ____ Tin cans, graduated sizes
- ____ Wallpaper and vinyl covering, left-overs and display books

Donald Van Den Berghe, Kay Dittmer, Connie Szymczak and William Houle
Committee Chairperson, Helen T. Suchara

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Later Elementary or Middle School Groups

AGES 10–14

INTRODUCTION
I BASIC ENVIRONMENTAL EQUIPMENT
II BASIC EXPENDABLE SUPPLIES
III AUDIOVISUAL EQUIPMENT
IV ARTS AND CRAFTS
V COOKING
VI GARDENING OR OUTDOOR CENTER
VII WOODWORKING AND CONSTRUCTION
VIII PSYCHO-MOTOR MATERIALS
IX LANGUAGE ARTS
Listening
Oral Expression—Dramatic Play
Reading
Writing—Recording
X MATHEMATICS
XI MUSIC AND RHYTHMS
XII SCIENCE
XIII SOCIAL STUDIES
XIV "JUNK BOX" SCROUNGED MATERIALS

The challenge in teaching early adolescents, 10- to 14-year-olds, is the range of differences in their total development, past experiences, needs, aspirations, motivation, and perception of self and others. Aiming to call forth maximum responsiveness of young people, the teachers of early adolescents are challenged to organize classrooms that generate involvement with ideas, projects, resources and people. Interaction or involvement is seen to be essential to cognitive development. It becomes a means of stimulating natural cognitive demands/conflicts that generate accommodation to the knowledge or views of others and assessment of knowledge, concepts, beliefs or attitudes held. Teachers can see more readily their role as facilitators of learning as youth in this age group begin to cope with the tasks at hand and to deal with life's incongruities. They can more clearly see their students as individuals with human adjustment problems unique to their age. The classroom can then become a place for exploring interests and ideas as well as developing peer and adult relationships.

The following list of educational equipment and materials is recommended as a base from which to select equipment and materials for setting up interest, work, skill, project or other areas. Subjects or areas of specialization, teaching styles, availability of specific resources, funding and curriculum planning will, of course, have direct bearing on the choices to be made. Inventiveness with resources is more difficult if funds are limited, but it is amazing what resources are discovered by those who put their minds and energy to the task.

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Later Elementary or Middle School Groups

AGES 10–14

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

Note: Items and priorities suggested on the following pages of this section are to be thought of as guides in the selection and acquisition of materials rather than inventories.

SUGGESTED ITEMS

	A	B	C	D
I BASIC ENVIRONMENTAL EQUIPMENT				
Bookcases	X			
Book display rack	X			
Bulletin boards	X			
Chairs	X			
Chalkboard	X			
Cubbies for storage and personal effects	X			
Filing cabinet	X			
First-aid kit stocked in accordance with individual school regulations	X			
Mirror, full length	X			
Paper cutter with guard (or access to)	X			
Peg board	X			
Peg board hooks	X			
Pillows			X	
Refrigerator or access to				
Room dividers	X			
Rugs or carpet squares		X		
Shelves, child height, movable	X			
Shelves designed for paper storage			X	
Sink with counter space	X			
Stove or hot plate (or access to)	X			
Tables	X			
Typewriter	X			
Typewriter primary (or access to)		X		
Workbench	X			
Xerox copier (access to)	X			
II BASIC EXPENDABLE SUPPLIES				
Acetate folders or sheets	X		X	
Block printing ink	X		X	
Chalk colored white	X	X	X	
Clay	X	X	X	
Cups	X	X	X	
Erasers:				
Chalkboard	X			
Rubber	X		X	
Fasteners, cotter pin type	X		X	

SUGGESTED ITEMS

	A	B	C	D
Glue:				
White	X	X	X	
Wood	X		X	
Rubber cement	X		X	
Gummed labels	X	X	X	
Kleenex	X	X	X	
Lettering pens	X			
Pins—straight & safety	X	X	X	
Thumb tacks	X	X	X	
Paper clips	X	X	X	
Pens	X	X	X	
Pencils	X	X	X	
Manila folders	X	X	X	
Mystic tapes, assorted colors	X	X	X	
Masking & Cellophane tape	X	X	X	
Non-flammable fluid for cleaning	X			
Paint, assorted colors:				
Enamel	X			
Flat	X		X	
Flourescent	X			
Model	X			
Oil pastels	X		X	
Tempera	X	X	X	
Watercolor	X	X	X	
Paintbrushes, assorted sizes	X			
Paper:				
Brown wrapping	X			
Butcher	X		X	
Carbon	X	X	X	
Contact	X	X	X	
Finger paint	X	X	X	
Graph, assorted	X		X	
Mimeograph	X		X	
Newsprint	X	X	X	
Notebook	X		X	
Oak tag	X		X	
Penmenship, assorted sizes	X	X	X	
Rice			X	
Shelf	X		X	
Sketching	X	X	X	
Story, plain at top, ruled lower half	X	X	X	
Typing	X	X	X	

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Later Elementary or Middle School Groups

AGES 10–14

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — A
Replacements and Additions
Second Year — B
Replacements and Additions
Third Year — C
Luxury Items — D

SUGGESTED ITEMS	A	B	C	D
Paste, wheat	X	X	X	
Pencil sharpener	X			
Playing cards, blank	X			
Punches, paper	X			
Reinforcements	X		X	
Rubber bands	X		X	
Sacks, paper	X		X	
Spiral notebooks	X		X	
Stenographers notebooks	X		X	
Suspension rings	X		X	
Tapes, blank cassette	X			
Stars & Stickers	X	X	X	
III AUDIOVISUAL EQUIPMENT				
Camera and film (or access to)		X		
Charts	X			
Dark room equipment (or access to)			X	
Dry mount press (or access to)		X		
Films (access to)				
Filmstrips (access to)				
Filmstrip viewers	X			
Globes	X			
Laminator (access to)				
Listening centers	X			
Maps	X			
Microcomputer		X		
Piano			X	
Projectors: (access to)				
Overhead				
Sixteen mm.				
Slide				
Record player	X			
Screen	X			
Slides (access to)				
Stereoscope			X	
Stereoscope reels			X	
Tape recorder, cassette	X			
Television set (access to)		X		
IV ARTS AND CRAFTS				
Aluminum foil	X	X	X	
Aprons or paint shirts	X			
Balsa wood	X	X	X	
Bead frames	X			
Beads	X	X	X	
Beans, various kinds	X	X	X	
Block printing equipment	X			

SUGGESTED ITEMS	A	B	C	D
Brushes, assorted	X		X	
Buckets	X			
Burlap	X	X	X	
Buttons, assorted	X	X	X	
Cardboard	X	X	X	
Carder, for carding wool		X		
Carpet wrap		X		
Charcoal	X	X	X	
Clay	X	X	X	
Clay tools	X			
Cloth, meshed	X		X	
Clothes pins	X			
Coffee stirrers	X	X	X	
Containers, many sizes	X	X	X	
Corks	X		X	
Cotton	X	X	X	
Cotton batting	X		X	
Crayons	X	X	X	
Crochet hooks	X		X	
Dye mordant			X	
Easels			X	
Embroidery hoops	X			
Felt	X		X	
Flour	X	X	X	
Food coloring	X	X	X	
Glitter	X	X	X	
India ink	X		X	
Iron, electric	X			
Kiln (access to)	X			
Kiln equipment (access to)	X			
Knitting needles	X	X	X	
Laundry starch	X	X	X	
Leather	X	X	X	
Leather tools	X			
Macaroni, various shapes	X	X	X	
Marker pens, permanent and water color	X	X	X	
Masking tape	X	X	X	
Needles, all sizes	X	X	X	
Oil	X		X	
Paints (See Basic Expendable Supplies.)				
Paint holders	X		X	
Paper (See Basic Expendable Supplies.)				
Paper, multi-colored, cloth, and textured material, for collages	X	X	X	
Paper plates	X	X	X	
Paper towels	X	X	X	

SUGGESTED ITEMS	A	B	C	D
Paste and glue (See Basic Expendable Supplies.)				
Pipe cleaners	X		X	
Plasticine, modeling material	X	X	X	
Plaster of Paris	X	X	X	
Plastic containers with tight covers for clay storage	X			
Potter's wheel (access to)			X	
Pots, for dyeing		X		
Rolling pins, for clay	X			
Salt	X	X	X	
Scissors and Shears	X		X	
Scotch tape	X	X	X	
Sketching paper (See Paper: Basic Expendable Supplies.)				
Spindles		X		
Stapler	X			
Tape measure	X			
Thimbles	X			
Thread	X	X	X	
Tongue depressors	X	X	X	
Toothpicks	X	X	X	
Twine	X	X	X	
Water paints (See Paint: Basic Expendable Supplies.)				
Waxed paper	X	X	X	
Weaving looms	X			
Wood scraps	X	X	X	
Wool, natural	X	X	X	
Yard goods, fabrics	X	X	X	
Yarn	X	X	X	

V COOKING				
Blender (access to)				
Bottle opener	X			
Bowls, serving, assorted sizes	X			
Cake pans	X			
Canisters, or other containers with lids	X			
Can opener	X			
Cleanser	X	X	X	
Colander			X	
Cookie cutters		X		
Cookie sheets	X			
Corn popper				X
Cups	X			
Egg beater	X			
Electric fry pan (access to)				
Electric mixer (access to)				
Foods	X			
Flour sifter	X			
Forks	X			
Frying pans and covers	X			
Glasses	X			
Knives: butter, paring, steak	X			
Ladle	X			
Pitchers	X			
Plates	X			
Pot holders	X			
Rolling pin	X			
Sauce pans and covers	X			

SUGGESTED ITEMS	A	B	C	D
Soap, for dishwashing	X			
Spatula	X			
Spices	X			
Spoons: measuring, serving, tablespoons, teaspoons	X			
Teakettle	X			
Towels and sponges	X	X	X	

VI GARDENING OR OUTDOOR CENTER				
Bulbs	X	X	X	
Fertilizer and plant food	X	X	X	
Flower boxes	X			
Flower pots and saucers	X			
Garden hose	X			
Hoes	X			
Pruning shears	X			
Rakes	X			
Seeds	X	X	X	
Shovels	X			
Soil	X	X	X	
Soil additives like vermiculite and perlite	X	X	X	
Soil test kit	X	X	X	
Terrariums or jars	X			
Trowels	X			
Watering cans	X			
Wheelbarrow		X		

VII WOODWORKING AND CONSTRUCTION				
Alcohol	X	X	X	
Axles			X	
Balsa wood		X	X	
C-clamps	X			
Coping saw	X			
Dowel rods	X	X	X	
File	X			
Glue, wood	X	X	X	
Hacksaw	X			
Hammers	X			
Hand drill and bits	X			
Hardware: hinges, hooks and eyes, staples, etc.	X	X	X	
Jigsaw	X			
Level	X			
Lumber: scraps of all kinds and white pine footage	X	X	X	
Nails, assorted	X	X	X	
Plane		X	X	
Pliers, needle nose and regular	X			
Power drill (access to)				
Power saw			X	
Rubber mallet		X		
Sandpaper	X	X	X	
Saw blades	X	X	X	
Shellac	X	X	X	
Screwdrivers, assorted	X			
Screws	X	X	X	
Socket wrench set			X	
Staple gun		X		
T-square	X			
Turpentine	X	X	X	

SUGGESTED EDUCATIONAL EQUIPMENT AND MATERIALS FOR:

Later Elementary or Middle School Groups

AGES 10–14

SUGGESTED ORDER OF ACQUISITION

Essential Items
First Year — **A**
Replacements and Additions
Second Year — **B**
Replacements and Additions
Third Year — **C**
Luxury Items — **D**

SUGGESTED ITEMS

	A	B	C	D
Vise	X			
Wheels		X		
Wire cutters	X			
Wire strippers	X			
Wood filler	X		X	
Workbench (See Basic Environmental Equipment.)				
Wrenches, assorted	X			
VIII PSYCHO-MOTOR MATERIALS				
Balance beams		X		
Balloons	X	X	X	
Balls: basketball, beach ball, football, soccer, softball, table tennis, tennis, volleyball	X			
Basketball standards (access to)				
Bats	X			
Chinning bars		X		
Climbing rope		X		
Climbing structures (access to)				
Equipment cart (access to)				
Gym scooters			X	
Hoops	X			
Hurdles (access to)				
Jump ropes	X			
Obstacle		X		
Parachute, approx. 24' x 28' (access to)				
Ping-pong table (access to)				
Rackets and paddles, for various sports	X			
Record player and records	X			
Shuttlecocks	X	X	X	
Stopwatch	X			
Tote bag for balls	X			
Tires for climbing: airplane inner tube, automobile and bicycle, old (access to)				
Traveling rings (access to)				
Tumbling mats	X			
Volleyball standards, net (access to)				
IX LANGUAGE ARTS				
Listening:				
Companion sets — books with complete script on records or cassettes	X			

SUGGESTED ITEMS

	A	B	C	D
Records, stories and poems	X			
Records for teaching listening skills	X			
Oral expression — dramatic play:				
Activity cards for tape recorder, teacher-made	X			
Cassette for oral expression	X	X		
Costumes for improvization		X		
Films	X			
Flannel board for child use	X			
Material for children to cut for stories	X	X	X	
Puppets, multi-ethnic		X		
Puppet theater		X		
Reading:				
Area for reading, comfortable	X			
Basals, if used, multi-level, appropriate interest	X			
Books in language of any child with foreign language background	X			
Cameras (access to)				
Comic books	X	X	X	
Film		X	X	
Language dictionaries	X			
Magazines	X	X	X	
Newspapers	X	X	X	
Reference books	X			
Supplementary texts, multigrade, appropriate interests	X			
Trade books, multi-level and tpic	X			
World record books	X			
Any well done, quality reference materials, e.g., adult books on fossils with excellent pictures		X		
Writing-recording:				
Activity cards for creative writing, teacher-made	X			
Box file for children's names and addresses	X			
Contact paper or book-binding tape	X	X	X	
Dictionaries, child made	X	X	X	
Dictionary	X			
Magazine and other pictures, for creative writing	X	X	X	
Material for construction of hard cover books	X	X	X	
Paper for creating cartoons	X	X	X	

SUGGESTED ITEMS	A	B	C	D
Paper, pens, pencils, etc. (See Basic Expendable Supplies.)				
Photo albums	X	X	X	
Scrapbooks	X	X	X	
Stationary and envelopes	X	X	X	
Thesaurus	X			
Typewriter paper (See Basic Expendable Supplies.)				
(See scrounge list for additional supplies.)				
X MATHEMATICS				
Abacus	X			
Adding machine				X
Area and perimeter boards	X			
Attribute materials	X			
Calculator			X	
Calipers			X	
Cash register and money			X	
Checkbooks		X		
Conversion charts	X			
Counters	X			
Cuisenaire rods, squares, cubes	X			
Erector set			X	
Flash cards	X			
Fraction bars	X			
Fraction wheel	X			
Games: checkers, chess, dominoes, etc.	X	X	X	
Geometric board	X			
Geometric solids, cardbook for making	X			
Graduated cylinders	X			
Marbles	X			
Mathematical balance	X			
Measuring devices, English and metric:				
Blank stick	X			
Clock	X			
Compass	X			
Gauges	X			
Map measures	X			
Meter and yardsticks	X			
Metronome				X
Pedometer				X
Rulers	X			
Scales and weights	X			
Stopwatch		X		
Tape measure	X		X	
Thermometers	X			
Trundle wheel			X	
Menus, catalogs and telephone directory business pages	X	X	X	
Number lines	X			
Nuts and bolts		X		
Order forms		X		
Pegboard	X			
Receipt books		X		
Rubber bands for geometric board	X		X	
Springs	X			
String	X			
Sugar cubes	X	X	X	

SUGGESTED ITEMS	A	B	C	D
Tangrams	X			
Tickets	X			
Washers, colored		X		
XI MUSIC AND RHYTHMS				
Autoharp		X		
Balloons	X	X	X	
Balls	X			
Blank sheet music	X	X	X	
Castanets, hand	X			
Charts	X	X	X	
Chimes	X			
Clappers	X			
Finger cymbals	X			
Gong	X			
Hoops	X			
Jump ropes	X			
Maracas	X			
Marimba		X		
Rattles	X			
Record player (See Audiovisual Equipment.)				
Records	X	X	X	
Recycled materials: beads, bells, cartons, coconut shells, drum heads (old), inner tubes, nails, roofing washers, rope, scarves, string, wire	X	X	X	
Rhythm sticks	X			
Sand blocks	X			
Triangle	X			
Xylophone	X			
XII SCIENCE				
Alcohol burner	X			
Ant farm	X			
Aquariums	X			
Baking soda	X	X	X	
Balances, double and single arm fulcrum, metric and English	X	X	X	
Balloons (See Music and Rhythms.)				
Barometer		X		
Batteries	X	X	X	
Beakers	X			
Bellows		X		
Bicycle pump	X			
Blotting paper	X	X	X	
Buzzers	X			
Cages for pets	X	X	X	
Clips	X			
Cooking timer	X			
Cornstarch	X	X	X	
Cotton	X	X	X	
Dissecting kit			X	
Dyes	X	X	X	
Egg timer	X			
Electric bells	X			
Electric bulbs	X	X	X	
Electric switches, assorted	X			
Filter papers	X	X	X	

SUGGESTED ITEMS	A	B	C	D
Flashlights	X			
Flexible plastic tubes	X			
Food coloring	X			
Funnels	X			
Gauges, rain, wind		X		
Incline plane		X		
Incubator	X			
Insect cage		X		
Iodine	X	X	X	
Iron filings	X	X	X	
Kites, material for making	X	X	X	
Lenses	X			
Litmus paper	X	X	X	
Magnetic compasses	X			
Magnets, assorted	X	X	X	
Magnifying glasses	X			
Magnifying glasses on stands	X			
Medicine droppers	X			
Microscopes (access to)				
Miniature electric motors	X		X	
Mirrors, assorted	X			
Nuts and bolts		X		
Pendulum frames		X		
Petri dishes	X			
Plants	X	X	X	
Plastic bags	X	X	X	
Preserving fluid, for specimens			X	
Prisms	X			
Pulleys	X			
Pumps	X			
Rock hammer and goggles		X		
Rocks	X	X	X	
Salt	X	X	X	
Sand and water table with materials	X			
Screwdrivers	X			
Shells	X	X	X	
Siphon	X			
Sponges	X	X	X	
Sprayers	X			
Springs	X			
Squeeze bottles	X			
Straws	X	X	X	
Sundial			X	
Syringes			X	
Take-a-part equipment: old clocks, typewriters, etc.	X	X	X	X
Test tubes and beakers	X	X		
Tubing	X	X	X	
Vinegar	X	X	X	
Weather vane			X	
Weights		X		
Wire	X	X	X	

XIII SOCIAL STUDIES

Acetate for making your own slides (See Basic Expendable Supplies.)

SUGGESTED ITEMS	A	B	C	D
Activity cards, teacher-made	X	X	X	
Books, appropriate interest levels	X			
Box file, for names and addresses of resource people children could contact for information	X			
Camera, films and flashbulbs (See Audiovisual Equipment.)				
Daily newspaper	X	X	X	
Globes	X			
Magazine and newspaper articles	X	X	X	
Map and globe kit	X			
Maps, assorted	X			
Multi-cultural kits and materials including clothing, artifacts, realia	X			
Simulation games	X	X	X	
Teacher collected magazine and newspaper articles	X	X	X	
Trade tapes on interest enrichment topics	X			
(See Language Arts for additional suggestions.)				

XIV "JUNK BOX" SCROUNGED MATERIALS

SUPPLY ACCUMULATED

Beads
Berry baskets
Boxes, all sizes
Cardboard
Car parts
Cartoons
Coconut shells
Dowels
Egg cartons
Fabrics
Film cartridges
Inner tubes
Jars
Leather scraps
Library book covers and paper
Materials for collages
Nails
Paper rolls
Parts of old equipment
Plastic containers
Rope
Scarves
Scrapbook
Spools
String
Take-apart equipment
Wire
Wood for: burning, painting and writing on, carpentry, carving, gluing free form designs

When Children Play

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